

Weekly Report No. 33

May 1, 1983 through May 7, 1983

Personnel on Site

Stone & Webster Michigan, Inc.

W. Kilker	5/2 - 5/7
P. Barry	5/2 - 5/3
L. Rouen	5/2 - 5/6

Parsons, Brinckerhoff Michigan, Inc.

J. Ratner	5/2 - 5/6
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Meetings Attended

<u>Date</u>	<u>Represented</u>	<u>Purpose</u>
5/2 through 5/5	Stone & Webster Bechtel Consumers Power Parsons 5/3 - 5/5	Daily Meetings

Activities

Construction -

Piers E/W 12: These piers have been completed and loaded for nearly 2 months. Unless non-routine rejackung or other unusual activity is performed at these piers no activity description will be included in this or future reports.

Piers E/W9: These piers have been completed and loaded for approximately 5 weeks. As in the case of E/W12 piers, activity descriptions on these piers will be generally omitted from future weekly reports.

Pier E11: No activity.

KC11 Drift: The excavation and lagging is virtually complete with only one drift set remaining to be installed. A sizable portion of the excavation was through unreinforced concrete - particularly in the northeast segment of the drift nearest pier E12. Along the southwestern side of the drift the thickness of concrete decreased to approximately 1½ ft. with clay fill making-up the remainder of the excavated section.

Pier E8: No further work (beyond the previously reported depth of 24 ft.) was performed on this pier. Drawing changes to the bell support system delayed the release for fabrication of not only the bell support steel but the lagging ring beam sets above the bell.

Pier E10 Drift: The excavation and lagging support has been complete. The excavated material consisted of approximately 1 ft. of unreinforced concrete underlain by clay fill.

East Access Shaft (Zone between access pits to E12 and E11): A cut slope in this area slumped on May 7 after a period of heavy rainfall. The Contractor cleared the area and installed wood lagging to prevent further slippage.

Pier W11: The pier load time deflection criteria was satisfied and the load transfer to wedges and the required routine rejack of the pier was performed.

KC2 Drift: The excavation was completed to 8 ft. south of a line formed by the south side of piers W11 and W12. The excavated material consisted of unreinforced concrete and sand/clay fill with a horizontal layer of fill sandwiched between concrete in certain areas.

Pier W8: The pier excavation and lagging was installed to El. 587 - a depth of approximately 13 ft. The excavated material was generally a clay fill. Minor groundwater seepage entered the excavation at El. 587.

Pier W10 Drift: The excavation and lagging support was completed. The excavated material consisted 1 ft. of unreinforced concrete underlain by a mixture of clay and sand fill. The pier template was located in preparation for the pier excavation.

Slope lay-backs north of piers E/W10: The Contractor excavated the slope lay-back on approximately a 1:1 slope in the existing fill materials.

SWPS: The Contractor began the installation of dewatering wells within the pumphouse. To-date the activity has consisted of the completion of 2 SPT borings.

Quality Control, Documentation and Records:

1. Assessed the proposed procedure for verifying the concrete vibrator frequency.
2. Observed the identification procedures used to control fabricated materials in the on-site fabrication shop.
3. Reviewed the qualifications and certifications of several QC inspectors that performed inspections on piers E/W9, 11 and 12. The inspection activities included excavation and lagging, mechanical splicing, reinforcing steel placement, concrete placement, bearing plate installation and load transfer.
4. Reviewed the issuance and use of the QA/QC Inspection Reports on the inspection activities tabulated under Item 3 above.
5. Observed the Engineering and QC inspection of the SPT borings performed in the SWPS.

Observations

Construction - The advancement of the drifts to KC2 and KC11 piers was hampered by the presence of unreinforced concrete - in the case of KC11 by the sheer quantity and at KC2 by the delay caused in determining the nature of a segment of "formed" concrete.

The Contractor responded to the slippage of the soil mass extending into the access shaft north of the KC11 drift by quickly installing lagging to prevent further slope deterioration.

The lagging set spacing at pier W8 is generally on the order of 1½ inches. A random verification of the backpacking quality indicated the granular backpacking material is generally filling any void space between the excavated soil and lagging sets. However, the inspection process is still hampered somewhat by the presence of the backpacking material extending well into the louvered area between lagging sets.

The pier W11 load transfer was completed by locking-off the load to the jackstand wedges. The Owner/Contractor will discuss with the NRC the engineering data obtained from this pier and others loaded to date.

The delay of more than one week in field activities on partially completed pier E8 due to design changes in the construction support system, in the Assessment Team's opinion, does not represent an endorsable planning/construction methodology. The Assessment Team feels the Contractor should be better prepared to complete a pier prior to initiating the excavation.

Quality Control, Documentation and Records - The fabrication shop was properly and clearly identifying and segregating QC "accepted" and "on-hold" materials.

The review of the inspector's certifications to perform inspections on numerous critical activities at 6 of the piers installed to-date indicated that the qualification and certification requirements were met by these individuals and that the issuance and use of the QC Inspection Reports was correct.

The Assessment Team requested a clarification on the assignment of the responsibility for verification of the concrete vibrator frequency. The Contractor agreed to address this concern.

The Assessment Team raised a concern about the practice of allowing field work to proceed beyond a stage in the construction where a NCR "hold-tag" has been installed on a certain item(s). If this practice is to continue there should be a means of documenting Engineering approval for the continuation of the field work.

The Assessment Team has an on-going concern over the lack of timely disposition of numerous outstanding QC hold-tags that have appeared on installed material. The majority of the NCRs written that have appeared as "hold-tags" in the work area have dealt with the temporary support system - drift sets, anchor bolts, drift set plates and pier lagging. If the work is going to proceed on a reasonable schedule the Organization (Engineering, Quality Assurance and Construction) must address and eliminate the numerous delays associated with non-conformances relating to these temporary support system details. As an example, at the present time in the pier W8 drift and pier excavation these are approximately 30 NCR "hold-tags". While some of the tags are a matter of only a few days old others have been in place nearly two weeks. It is our opinion that the nature of the majority of these non-conformance is such that complete disposition should be accomplished easily within a few days.

Design Work Packages and Procedures - The Assessment Team performed an overview of the design work package relating to the installation and load transfer to piers E/W 10, KC2, KC3, KC10 and KC11. In general, the package was complete. However, the Team discussed with the Owner the degree to which drawings and procedures should be actually included in the "package" or referenced as existing.

Non-Conformance Identification Reports

Status of previous issues: (NIR numbers no longer listed have been closed-out.)

<u>NIR NO.</u>	<u>Description</u>	<u>Date</u>	
		(Opened)	(Closed)
5	Concrete Mix Qualification	2/10/83	
6	Lagging Spacers	3/21/83	
7	Backpacking Material in Wet areas-Pier W11	4/5/83	
8	Load Transfer Methodology - Pier E12	4/5/83	
9	Release of Pier W9 for Load Transfer	4/13/83	
10	Verification of Vibrator Frequency	4/21/83	

WE Kuhn
Project Engineer

A. S. Seach *by WSA*
Project Manager

DAILY INDEPENDENT ASSESSMENT TEAM MEETING

Date: May 2, 1983

Attendees:

Bechtel

D. Lavelle
J. Fisher
J. Gaydos

Stone/Webster

P. Barry

MPQAD

R. Sevo

CPCo

G. Murray

Parsons

J. Ratner

1. D. Lavelle provided a copy of the latest data for the load test of pier W11. The pier is maintained on jacks at 110 per cent of specified load. Bechtel and CPCo intend to have a conference call with the NRC to discuss the test results.
2. J. Fisher stated that the "Administrative Guideline" for Construction Aid Procedure had been distributed for final comment. The Assessment Team has been provided with a copy.
3. D. Lavelle will provide a copy of the NCRs written on weld fabrication last week.
4. J. Fisher read E. Cvikl's response to the April 28th question concerning unreinforced KC piers. These piers are designed as pedestals in accordance with ACI 318. Soil support allows these piers to be constructed with plain concrete.
5. P. Barry questioned why expansion anchors in the east drift, that have hold tags, were put "in service" by the fact that the drift excavation was allowed to proceed beyond the point of infraction. These NCRs were written when after a reinspection the excavation had progressed past the affected drift sets. In the West drift the excavation waited until the drift sets including expansion anchors were properly installed. Bechtel is aware of the situation and will provide an explanation.

DAILY INDEPENDENT ASSESSMENT TEAM MEETING

Date: May 3, 1983

Attendees:	<u>Bechtel</u>	<u>Stone/Webster</u>	<u>MPQAD</u>	<u>CPCo</u>
	J. Fisher	W. Kilker	J. Shah	-----
	J. Gaydos	L. Rouen		
		<u>Parsons</u>		
		J. Ratner		

1. J. Fisher explained that the delay in completing the shaft portion of pier E8 is due to lack of approval for the shop drawing showing changes in the lagging sets just above the bell elevation. Approval is expected shortly so fabrication can proceed.
2. J. Fisher and J. Shah explained the basis for determination of whether or not work proceeds in a particular area after an NCR has been issued by MPQAD. After issuing a particular NCR, MPQAD discusses the matter with Resident Engineering in terms of impact on proceeding with construction. At that time the NCR is worded in terms of prohibiting or allowing work to proceed "around" the subject of the NCR. L. Rouen agreed that this type of action or discussion on an NCR would be appropriate providing there was a method of documenting the Engineering concurrence. In the case of the E8 drift Hilti-bolt related NCRs, it was determined that the nature of the non-conformances was such that work could proceed. J. Fisher said FSO had dispositioned these particular NCRs to Engineering and were awaiting resolution.
3. General discussion of the up-date on pier W11 load test.

DAILY INDEPENDENT ASSESSMENT TEAM MEETING

Date: May 4, 1983

Attendees:	<u>Bechtel</u>	<u>Stone/Webster</u>	<u>MPQAD</u>	<u>CPCo</u>
	J. Gaydos	L. Rouen	J. Shah	G. Murray
	E. Cvikl	W. Kilker		A. Blocher
		<u>Parsons</u>		
		J. Ratner		

1. W. Kilker said the Assessment Team observed the NCR on pier W9 concrete placement has not been removed. FSO will investigate.
2. There was a discussion of backpacking of lagging sets on pier E8. The Assessment Team observed that the lagging spacers were on the average 1-1/8 inches thick and that the backpacking material was still being placed to the inside face of the lagging. In the opinion of the Team both of these conditions continue to hamper somewhat the backpacking operation and in particular the inspection process. FSO will take action.
3. E. Cvikl advised that the shop drawings for E8 ring beam lagging sets should be signed out today allowing fabrication to commence. However, field work will not begin until all fabrication is completed.

DAILY INDEPENDENT ASSESSMENT TEAM MEETING

Date: May 5, 1983

Attendees:	<u>Bechtel</u>	<u>Stone/Webster</u>	<u>MPQAD</u>	<u>CPCo</u>
	E. Cvikl	W. Kilker	R. Sevo	-----
	J. Gaydos	L. Rouen		
	J. Fisher			
	D. Lavelle			
		<u>Parsons</u>		
		J. Ratner		

1. D. Lavelle and W. Kilker discussed the potential impact on construction with the use of the proposed Construction Aid Procedure. D. Lavelle said defining certain of the construction operation and installation as Construction Aids should have a positive impact on the underpinning activity.
2. J. Fisher provided a Mergentime schedule for the installation of pier E8 and E8 grillage.
3. W. Kilker reported the Team's observation of the QC hold tag on pier W9 concrete pour. FSO will investigate to determine state of disposition.
4. J. Fisher reported that FSO concurred with lagging spacer sizes on pier E8. In order to expedite the inspection process spacers in the future will be on the order of 1-3/8 - 1-1/2 inches thickness.
5. L. Rouen questioned the assigning of responsibility for checking the concrete vibrators - would it go to Field Engineers or QC. FSO will take action to discuss the responsibility.
6. J. Gaydos provided a copy of all NCRs related to tolerances to the Assessment Team.
7. J. Ratner questioned why the lower level plates at jack #4 on pier W11 do not level up with adjacent plates. FSO will take action to determine that load application is appropriate.

DAILY INDEPENDENT ASSESSMENT TEAM MEETING

Date: May 6, 1983

No meeting was held on this date.



STONE & WEBSTER MICHIGAN, INC.

P.O. Box 2325, BOSTON, MASSACHUSETTS 02107

PRINCIPAL STAFF			
RA	ENF		
D/RA	SCS		
A/RA	PAO		
DPRP	SLO		
DRMA	RC		
DRMSP			
DE			
ML			
OL	FILE		

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

May 10, 1983

J.O. No. 14358
Ref. MPF 33

Attention Mr. R. Cook

RE: DOCKET NO. 50-329/330
MIDLAND PLANT - UNITS 1 and 2
INDEPENDENT ASSESSMENT OF UNDERPINNING
REPORT NO. 33

A copy of the Independent Assessment of the Underpinning Weekly Report No. 33 for the period May 1, 1983 through May 7, 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/ka

MAY 16 1983