

STONE & WEBSTER ENGINEERING CORPORATION



245 SUMMER STREET, BOSTON, MASSACHUSETTS

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DESIGN
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REPORTS
EXAMINATIONS
CONSULTING
ENGINEERING

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

February 9, 1983

J.O. NO. 14358
Ref. MPF 20

Attention Mr. R. Cook

RE: DOCKET NO. 50-329/330
MIDLAND PLANT - UNITS 1 and 2
INDEPENDENT ASSESSMENT OF AUXILIARY BUILDING UNDERPINNING
REPORT NO. 20

A copy of the Independent Assessment of the Auxiliary Building Underpinning Weekly Report No. 20 for the period January 30, 1983 through February 5, 1983, is enclosed with this letter. Included, as an attachment, 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
Project Manager

Enclosures

ASL/ka

8406120158 840517
PDR FOIA
RICE84-96 PDR

FEB 14 1983

J.O. NO. 14358
Midland Plant
Units 1 and 2
Independent Assessment
Auxiliary Building Underpinning

Weekly Report No. 20

January 30, 1983 through February 5, 1983

Personnel on Site

Stone & Webster Engineering Corporation (SWEC)

✓ W. Kilker	1/31 - 2/5
✓ A. Scott	1/31 - 2/5
✓ B. Holsinger	1/31 - 2/4
✓ A.S. Lucks	2/1 - 2/2
G.M. Schierberg	2/1
N.B. Cleveland	2/1
J.P. Allen	2/1
J.R. Hall	2/1
E.A. Long	2/1

Parsons, Brinckerhoff, Quade and Douglas (PBQD)

J. Ratner	1/31 - 2/3
L. Silano	2/1

Meetings Attended

<u>Date</u>	<u>Represented</u>	<u>Purpose</u>
1/31 through 2/4	Stone & Webster Bechtel Consumers Power Parsons (1/31 - 2/3)	Daily Meetings
2/4	Stone & Webster Bechtel Consumers Power	Weekly Soils Review
2/1	Stone & Webster Consumers Power Parsons	Senior Level Management Team Site Visit

Activities

Construction - Within pier W12 the bell bottom reinforcing mat, shaft stirrups and vertical reinforcing steel was installed up to about El. 604. The Fox-Howlett couplers used to join sections of reinforcing rod were installed and torqued. Forming was begun for the portion of the pier above the access drift floor at El. 600. In addition, three embedment plates with headed stud anchors were installed as shown on the design drawings.

J.O. NO. 14358
Midland Plant
Units 1 and 2
Independent Assessment
Auxiliary Building Underpinning 2

Grouting behind the steel plating in the bell was done where necessary to fill voids. Since nearly all of the bell area has been sheeted and braced there are only small areas of soil left exposed. Throughout the week there has been minor raveling of the exposed soil near the bottom of the bell. Minor seepage of groundwater into the pier continued to accumulate on the mud-mat and was easily handled by periodic bailing.

Excavation of pier E12 as a straight shaft was completed to El. 565, approved by the Engineers, and a concrete mud-mat was installed at the bottom. Work on the bell commenced once the mat had set sufficiently to allow work to proceed. Initially, the short sides of the bell were formed and trimmed to the correct dimensions. Then the long sides were excavated in two stages on each side followed by cutting the slopes into the corners. The installed bell support consists of 2 braced channel sections extending the entire height of the bell on each of the long sides of the bell.

The excavated soil consisted of a natural, very stiff gray clay with occasional randomly oriented thin brown silt lenses. No groundwater entered the excavation.

Quality Control, Documentation and Records -

1. Reviewed the batch plant calibration and certification.
2. Reviewed the certification and tests for concrete materials.
3. Witnessed the QC inspection and subsequent documentation of pier W12 bell.
4. Reviewed QC Inspection Reports for concrete mud-mat placement in piers W12 and E12.
5. Witnessed the QC inspection of torquing of Fox-Howlett couplers between approximate El. 580 and El. 590 on pier W12.
6. Reviewed truck mixer uniformity test results.
7. Verified the taking and testing of the specified number of Fox-Howlett "sister splices" of the No. 11 reinforcing bars installed in pier W12. Verified the strength adequacy of the referenced splice tests.
8. Reviewed Geotechnical Engineers Daily Reports on pier W12.
9. Verified the evaluation and acceptance of the pier W12 subgrade.
10. Verified sign-off of Geotechnical Engineer on QC Inspection Report on excavation of piers.

J.O. NO. 14358
Midland Plant
Units 1 and 2
Independent Assessment
Auxiliary Building Underpinning

3

Observations

Construction - The pier W12 bell support installation was judged to be thoroughly done in accordance with good industry practice. The steel plates are well supported and care was taken to grout behind the plates as required.

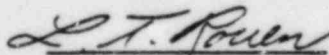
The reinforcing steel was clean and installed properly. The tapered threaded ends of the reinforcement were protected and in good condition prior to installation. The Fox-Howlett coupler connections were being properly installed. The pier E12 bell installation was accomplished quite efficiently. The combination of the stiff clay till and absence of ground-water seepage resulted in normal bell support without the additional support required on pier W12.

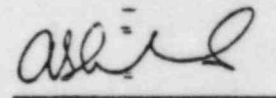
Quality Control, Documentation and Records - The review of the documentation on the batch plant, concrete materials, truck mixer uniformity and coupler splice testing indicated these items are in conformance with the project requirements. In addition, the Team's review of the QC Inspection Reports for the mud-mats and bell inspections, and the Geotechnical Engineers Daily Reports demonstrated that adequate records and documentation of these activities have been kept. The Team identified a minor problem with one facet of the concrete Inspection Report, in that the method of consolidating the concrete was not identified. The Team also observed that completion of Inspection Reports should be done in a more timely manner. The adequacy of the QC Inspector's performance on the bell inspection and coupler torquing was demonstrated in the presence of a member of the Assessment Team during the actual inspections.

Non-Conformance Identification Reports

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

<u>NIR No.</u>	<u>Description</u>	(Opened)	<u>Date</u>	(Closed)
4	Welding Qualification Procedure	12/29/82		


Project Engineer


Project Manager

J.C. NO. 14358
Midland Plant
Units 1 and 2
Independent Assessment
Auxiliary Building Underpinning 3

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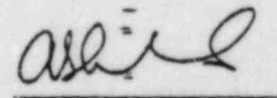
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Project Engineer


Project Manager

INDEPENDENT ASSESSMENT TEAM MEETING WITH BECHTEL

Date: January 31, 1983

Attendees	<u>Bechtel</u>	<u>Stone/Webster</u>	<u>MPQAD</u>	<u>CPCo</u>
	J. Fisher E. Cvikl	A. Scott B. Holsinger	J. Shah	G. Murray R. Weiland
		<u>Parsons</u>		
		J. Ratner		

1. Discussed the need for a definition of when couplers can be torqued against reinforcing bars embedded in freshly placed concrete. This situation will arise when bell concrete is placed prior to installation of the shaft reinforcement. E. Cvikl will resolve.
2. A. Scott questioned why the resolution of the channel welding non-conformance on the pier W12 access drift has not yet been dispositioned.
3. J. Fisher stated that as a result of recent discussion with the NRC, an FCN is being prepared to require vibration of all the concrete placed in pier W12. A Mergentime procedural change will be to generated.
4. The Team requested the schedule on U.S. Testing calibration of jacks and the mock-up of jacking set-ups. J. Kelleher will notify.
5. A. Scott requested copies of truck mixer uniformity tests and pump calibrations for water reducing agents.

INDEPENDENT ASSESSMENT TEAM MEETING WITH BECHTEL

Date: February 1, 1983

Attendees:	<u>Bechtel</u>	<u>Stone/Webster</u>	<u>MPQAD</u>	<u>CPCo</u>	<u>Mergentime</u>
	E. Cvikl	A. Scott	R. Sevo	-----	T. Goedjen
	R. Bradford	W. Kilker			
	J. Kelleher				

Parsons

J. Ratner

1. Discussion of previous items not resolved (coupler torquing, mixer uniformity, grout storage.)
2. J. Ratner asked for status of pier W12 jacks. T. Goedjen replied the jacks are on-site with calibrated gauges.

INDEPENDENT ASSESSMENT TEAM MEETING WITH BECHTEL

Date: February 2, 1983

Attendees: Bechtel Stone/Webster MPQAD CPCo
 E. Cvikl A. Lucks G. Carpenter G. Murray
 W. Kilker
 A. Scott

1. G. Murray requested that Bechtel take steps to respond more efficiently to a number of open item questions or requests of the Team.
2. Team concern of storage of grout materials is being addressed by a change in Mergentime procedure.
3. A. Scott reported he had received the mixer uniformity test results on the non-plasticized concrete mix. If plasticizer is to be used he requested simuler results be made available for that mix.

INDEPENDENT ASSESSMENT TEAM MEETING WITH BECHTEL

Date: February 3, 1983

Attendees:	<u>Bechtel</u>	<u>Stone/Webster</u>	<u>MPQAD</u>	<u>CPCo</u>
	E. Cvikl	A. Scott	R. Sevo	G. Murray
	J. Gaydos	W. Kilker		
	J. Fisher			
		<u>Parsons</u>		
		J. Ratner		

1. J. Fisher reported that daily meeting times may vary in order to allow J. Fisher or D. Lavelle to attend the meeting.
2. J. Gaydos will be responsible for tracking Team requests. J. Fisher presented a close-out schedule for responding to Team requests on Carlson meters, grout storage, NCR disposition on pier W12 channel welding, plasticizer metering equipment, and grout strength determination.
3. J. Ratner submitted a list of questions as a result of observations of the excavation and support of piers W12 and E12:
 - A. Has the use of beam sections, rather than channel sections for bell support, been considered as an option to allow for easier insertion of plating when required?
 - B. Would shotcrete be an acceptable alternate bell support method?
 - C. Has the use of bentonite powder applied to the exposed soil surfaces been considered a means to stabilize any revealing material?
 - D. Why are the short sides of the lagging spreader sets being spread and not the long sides?J. Fisher and J. Gaydos will respond.
4. J. Fisher explained that in future piers the bell excavation maybe initiated once the bottom of the shaft section is reached without first excavating the shaft section to final grade.
5. A. Scott questioned why the steel lagging is considered under AISC structural steel code with respect to a recent non-conformance written on the use of washers for the lagging bolts. J. Fisher will respond.
6. W. Kilker asked if due to the break in the construction activities not that the excavating of piers W12 and E12 is nearing completion, the "trained" labor force could be lost by lay-offs. This action could deter from the goal to learn from the initial pier installations. J. Fisher said every reasonable effort would be made to retain the the labor crews until the next excavating activity proceeds.

INDEPENDENT ASSESSMENT TEAM MEETING WITH BECHTEL

Date: February 4, 1983

<u>Attendees:</u>	<u>Bechtel</u>	<u>Stone/Webster</u>	<u>MPQAD</u>	<u>CPCo</u>
-	E. Cvikl	A. Scott	R. Sevo	G. Murray
	J. Fisher	W. Kilker		J. Mooney
	J. Gaydos	B. Holsinger		J. Schaub

1. W. Kilker stated the Team received a copy of MCP 28.000. The Team will review the procedure to evaluate how previous questions have been addressed.
2. J. Fisher reported that if a concrete mix design with plasticizer is approved and tested this material will be used for pier W12. Reportedly the strength of the plasticized concrete is gained faster than "non-plasticized" concrete.
3. W. Kilker requested an explanation of the field engineering response to an NCR written on steel lagging washers. J. Fisher explained the steps taken by the "field" to expedite the disposition.
4. J. Fisher stated the tell-tale centralizers are being fabricated. A. Scott said he intends to witness the procedure.
5. Since J. Fisher also keeps notes of the daily Team meetings with Bechtel, W. Kilker will insure that the Bechtel copy includes at least the topics included in the Team copy. This consistency is important since Bechtel takes action based on those items on their copy.
6. W. Kilker reminded J. Fisher that one of J. Ratner's questions of February 3, 1983 had not been included on Bechtel's meeting notes.

GOVERNMENT ACCOUNTABILITY PROJECT

Institute for Policy Studies
1901 Que Street, N.W., Washington, D.C. 20009

(202) 234-9382

February 16, 1983

FREEDOM OF INFORMATION
ACT REQUEST

FOIA-83-90

Rec'd 2-22-83

Director
Office of Administration
Nuclear Regulatory Commission
Washington, D. C. 20555

To Whom It May Concern:

On behalf of our client, Mr. E. Earl Kent, and pursuant to both the Freedom of Information Act (5 U.S.C. §552) and the Privacy Act (5 U.S.C. §552a), we request copies of all notes, memoranda, telephone logs, tapes, diaries, Inspection Evaluation Forms, and/or other records prepared by U.S. government employees in connection with the July 1982 Stop Work Order issued to the Midland Nuclear Power Plant by the Nuclear Regulatory Commission. The above request includes, but is not limited to, communications between Nuclear Reactor Regulation, the Nuclear Regulatory Commission and the Advisory Committee on Reactor Safety.

If any material covered by this request has been destroyed and/or removed, please provide all surrounding documentation, including but not limited to a description of the action(s) taken, relevant date(s) and justification for the action(s).

Mr. Kent requests that fees be waived, because "finding the information can be considered as primarily benefitting the general public." 5 U.S.C. §552(a)(4)(A). The Government Accountability Project is a non-profit, nonpartisan public interest organization concerned with honest and open government. Through legal representation, advice, national conferences, films, publications and public outreach, the Project promotes whistle-blowers as agents of accountable government. We are requesting the above information on behalf of our client for a monitoring project on the adequacy of the NRC's efforts to protect public safety and health at nuclear power plants.

For any documents or portions of documents that you deny due to a specific exemption, please provide an index itemizing and describing the documents or portions of documents withheld. The index should provide a detailed justification of your ground(s) for claiming each exemption, explaining why each exemption is relevant to the document or portion withheld. This index is required under Vaughn v. Rosen (I), 484 F.2d 820 (D.C.Cir. 1973), cert. denied, 415 U.S. 977 (1974).

We look forward to hearing from you within ten working days.

Yours truly,

B. J. Garde

BILLIE GARDE
Director, GAP Citizens Clinic

BG/my

1pg

Rec'd 2/23/83
8:15
a



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION III
 799 ROOSEVELT ROAD
 GLEN ELLYN, ILLINOIS 60137

February 22, 1983

MEMORANDUM FOR: Director, ~~DPRP~~
 Director, ~~DEP~~ *RF Wornick*
 Director, ~~DRSMP~~
 Director, DRMA

FROM: Region III FOIA Coordinator

SUBJECT: FOIA REQUEST 83-90 *Midland*
BAP Request

The attached FOIA request has been received in RIII and the material requested must be submitted to the Director, DRMA by 3/1/83.

Please check the applicable block and return the form to me by

2/25/83.

1. The Division of _____ has no documents relating to this request; however further information may be available from _____
 (List other Division, Region(s), Offices, person(s).)
2. The Division of _____ has documents relating to this request and the search time is expected to be less than two (2) hours. IF THIS BLOCK IS CHECKED - PLEASE BEGIN SEARCH IMMEDIATELY.
3. The Division of _____ has documents relating to this request and the search time is expected to be more than two (2) hours. IF THIS BLOCK IS CHECKED - DO NOT BEGIN SEARCH UNTIL FIRST TALKING TO ME.

Other Comments: _____

 Date

 Signature- Division Director or Designee

Thank you for your cooperation.

Pearl T. Smidth
 RIII FOIA Coordinator

Attachment: As stated

cc w/att:
 A. B. Davis
 Steve Lewis