

Handyman



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

DEC 20 1982

MEMORANDUM FOR: James G. Keppler, Regional Administrator
FROM: R. F. Warnick, Acting Director, Office of Special Cases
SUBJECT: MIDLAND MONTHLY STATUS REPORT

Enclosed are two monthly status reports for the Midland project. The first report is for the period August 1, 1982 through October 31, 1982. The second report is for the month of November. The Midland Section of the Office of Special Cases is preparing these monthly reports to enable us to keep track of the important chronological happenings at Midland and to provide a mechanism for keeping IE and NRR informed.

The first report proved to be repetitious of information contained in monthly inspection reports and too time consuming to prepare and read. The second report is one page and contains all the salient information. Future reports will follow the format of the November report.

RFWarnick

R. F. Warnick, Acting Director
Office of Special Cases

Enclosures: As stated

cc w/encl:
D. G. Eisenhut, NRR
J. H. Sniezak, IE

8408150603 840718
PDR FOIA
RICE84-96 PDR

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

MIDLAND MONTHLY STATUS REPORT

AUGUST 1 - SEPTEMBER 30, 1982

A. SUMMARY OF THE MONTH

Midland Inspection Site Team efforts at the Midland Construction Site during the month of October were concentrated on inspection of the Diesel Generator Building. The Diesel Generator Building was chosen to be representative of the adequacy of construction on site. The inspection had not been completed as of the end of the status report period and will be addressed in a subsequent status report.

Remedial soils work is stopped until Quality Control Personnel are recertified per an upgraded qualification program discussed in Section B.1.b.

Heating, ventilation and air conditioning (HVAC) work has been continuing under the Consumers Quality Control and Quality Assurance organization formed to control HVAC construction. Items identified as relevant to the Part 21 of August, 1981 are reviewed, evaluated and dispositioned. (Section B.2)

Pertaining to misinstalled electrical cables, the licensee informed the NRC that 100% reinspection of class 1E cables installed or partially installed by March 15, 1982, was required. Also, during this status report period, the licensee reported a potential 10 CFR 50.55(e) regarding unauthorized substitution of underrated cables. This unauthorized substitution was detected as a result of Consumers Power Company modifying the reinspection requirements for class 1E cables in response to allegations received through a local television station.

The licensee has agreed to a 100% reinspection of all hangers installed in CY 1980 and a sample reinspection of hangers installed after January 1, 1982. Ongoing inspections during October 1982 have found additional discrepancies pertaining to classification, installation and inspection of hangers in the Diesel Generator Building.

B. SIGNIFICANT MIDLAND ISSUES

1. Soils

- a. During an inspection, the inspectors determined that the licensee had apparently violated the ASLB Order of April 30, 1982. The licensee excavated below the deep "Q" soils, without prior NRC approval. The licensee stated that prior approval was granted by NRR. Subsequently, RIII issued a CAL on August 12, 1982. The licensee commitments identified by the CAL included:

- (1) Stop all remedial soils work.
- (2) Prior to lifting this Stop Work, the licensee will obtain prior written approval of work activities.

RIII has requested the OI to conduct an investigation into the matter.

RIII and CPCo have established a Work Authorization Procedure to ensure further compliance to the ASLB Order.

b. During the initiation of the CPCo recertification program for all Bechtel QC inspectors integrated into the soils QA/QC organization, the RIII inspectors determined the following while observing several oral exams:

- (1) The examiner would excessively repeat questions allowing the examinee several attempts to answer correctly.
- (2) The examiner would mark questions NA when the examinee failed to answer correctly even though the question was relevant.
- (3) The technical portion of the exam lacked technical content necessary to establish the examinee's comprehension of the activity.
- (4) The examiner used a controlled copy of a PQCI to make up the exam questions which was different from another controlled copy obtained from the QC records vault.

Subsequently, RIII issued a CAL on September 24, 1982.

The licensee commitments identified by the CAL included:

- (1) Stop all remedial soils work except for freezwall, dewatering wells and auxiliary building instrumentation readings.
- (2) Suspend all requalifications.
- (3) Decertify all QC personnel previously certified.
- (4) Establish a retraining program for all QC personnel who fail recertification.
- (5) Develop written exams for recertification.

The NRC has reviewed the recertification program and authorized CPCo to commence remedial soils QC requalification activities on October 28, 1982. All remedial work will remain stopped until such time as previously decertified QC personnel are requalified.

2. HVAC (Zack)

In January, 1981, the NRC levied a \$38,000 Civil Penalty against Consumers Power Company for QA deficiencies in the installation of heating, ventilating, and air conditioning (HVAC) systems. These QA deficiencies were noted during an investigation which transpired from March through July, 1980. As a result of this enforcement action,

the licensee removed responsibility for QA and QC functions for HVAC system work from the subcontractor (Zack Co.) and performs these functions using utility personnel. Removing QA/QC responsibility from the Zack Company has resulted in apparent improvement in performance at the site.

In August, 1982, the NRC received allegations pertaining to QA/QC irregularities at the Zack Company, Chicago, Illinois factory. Also, a potential 10 CFR Part 21 notification was made by the Zack Company to RIII pertaining to discrepancies between the welder of record and the welder actually performing the weld. RIV, through the Vendor Inspection Program, performed an inspection of the Zack Company, Chicago, Illinois operation. RIV had not issued the report on this matter at the time this report was prepared.

It was established that the Midland Site did receive fabricated HVAC items from Chicago, Illinois. However, Consumers Power Company performs a complete receipt inspection, including visual weld inspections. The tracking system that Consumers Power Company has established for HVAC items, allows the licensee the ability to locate any nonconforming item. Consumers Power Company also has established controls such that any of the suspect HVAC system components would not be covered by ongoing work until it can be established whether rework will be necessary. Many of the HVAC system components are fabricated on site.

3. Electrical

During the special team inspection conducted in May, 1982, the NRC identified concerns in regards to the adequacy of inspections performed by electrical Quality Control inspectors. These concerns were the result of the NRC's review of numerous Nonconformance Reports (NCR) issued by MPQAD personnel during reinspections of items previously inspected and accepted by Bechtel QC inspectors. The NRC required the licensee to perform reinspections of the items previously inspected by the QC inspectors associated with the MPQAD NCR's. The licensee, in reports submitted to the NRC in May and June, 1982, reported that of the 1084 electrical cables reinspected, 55 had been determined to be misrouted in one or more vias. This concern was upgraded to an item of noncompliance and is documented in Inspection Report No. 50-329/82-06; 50-330/82-06.

On September 2, 1982, the licensee was informed by the NRC that a 100% reinspection of class 1E cables installed or partially installed before March 15, 1982, was required. In addition, the licensee was required to develop a sample overinspection program for those cables installed after March 15, 1982. The licensee, on October 15, 1982, agreed to perform these overinspections.

On October 28, 1982, Consumers Power Company reported a potential 50.55(e) issue regarding the unauthorized substitution of class 1E cables. This issue was identified by the licensee while performing the aforementioned reinspections. During the week of October 11, 1982, a Detroit television station had broadcast a series of reports concerning construction deficiencies at the Midland site. One of the alleged deficiencies involved the unauthorized substitution of cables. As a result of the alleged deficiency, Consumers Power Company QA inspectors modified the reinspection requirements for the class 1E cable reinspections. This modification, which involved determining the proper cable type by reading the cable jacket inscriptions rather than the attached cable tags, resulted in the identification of the unauthorized substitutions.

4. Mechanical

During the NRC-Region III team inspection conducted in May, 1981, a Region III inspector observed that piping suspension system components were not constructed and installed in accordance with drawing and specification requirements. In addition, the inspector determined that QC inspectors had failed to identify the installation deficiencies. (Inspection Report No. 50-329/81-12; 50-330/81-12)

In response to the inspector's finding, the licensee performed an overinspection and determined that a large percentage of rejectable hangers were not identified during Bechtel QC inspections.

A request was made to the licensee for a 100% reinspection of all hangers installed in CY 1980, and a sample reinspection of hangers installed after CY 1980. In a letter dated September 30, 1982, Consumers Power Company agreed to reinspect 100% of hangers installed before January 1, 1981, and a sample inspection of hangers installed after January 1, 1981.

Inspection conducted during the month of October, 1982 has found additional problems related to the installation and inspection of hangers in the Diesel Generator Building. The concern involves hangers that are built to seismic category one standards, but are considered "non-Q" by system designation. Consumers has taken exception to Reg. Guide 1.29 titled "Seismic Design Classification," which delineates requirements for non-Q systems which could impact safety related systems during a seismic event. A letter from NRC Region III has been sent to NRR requesting resolution.

C. CONSTRUCTION STATUS

1. Soils

Remedial soils activities performed by the licensee thus far in 1982 involve:

- a. Permanent dewatering wells.
- b. Temporary auxiliary building dewatering wells.
- c. Freezeway around auxiliary building.
- d. Auxiliary building underpinning access shafts to EL 609.
- e. Modification work of overhead temporary FIVP support structure.
- f. Auxiliary building underpinning monitoring instrumentation.

2. FVAC (Zack)

The licensee QA group has performed an audit of the on-site Zack Company Training and Documentation functions during October, 1982. The audit report is not finalized, but the licensee indicated there were some "minor" findings. The Zack Company has retained a mechanical engineer (P.E.) as a Project Field Engineer on site and upgraded other staff positions.

The specifications for inspecting HVAC duct work has been modified to include a provision for rigorously testing with differential air pressure those isolated portions of duct work that have either rejectable or uninspectable welds that cannot be repaired without extensive rework. If the questionable welds maintain integrity throughout the pressure testing, it is planned to make an acceptable engineer disposition based on the test.

Consumers Power Company QA is performing a 100% overinspection on all ongoing welder qualification in accordance with an established and approved inspection plan. The individual performing the inspection must be certified by AWS as a qualified welding inspector.

Approximately 25% of all HVAC quality items have been accepted by the licensee.

3. Electrical

As of the date of this report, a significant amount of electrical cable installations, cable terminations, raceway installations, and equipment installations has been completed at the Midland Site. The bulk of present ongoing work activities continues to reflect these activities. Overall electrical construction status is estimated to be as follows:

- | | |
|---------------------------------|------|
| a. Conduit installations | 91% |
| b. Wire and cable installations | 91% |
| c. Cable terminations | 79% |
| d. Cable tray installations | 100% |
| e. Equipment installations | 98% |

4. Mechanical

As of the date of this report, a significant amount of small and large bore piping has been completed at the Midland Site. The bulk of present ongoing work activities involve hanger and instrument impulse line installation. Mechanical construction status is estimated to be as follows:

a. Large pipe installations	98%
b. Large pipe hanger installation	95%
c. Small pipe installation	95%
d. Small pipe hanger	81%
e. Mechanical equipment	99%

5. Miscellaneous

a. Formation of Office of Special Cases

In July, 1982, the Regional Administrator formed the Office of Special Cases (OSC) and assigned Mr. R. F. Warnick as the Acting Director. This office has full responsibility for inspection activities at the Midland and Zimmer nuclear facilities.

Under the direction of the Acting Director, OSC, the Midland Section was formed consisting of a Section Chief, two Regional-based inspectors, a Senior Resident Inspector, a Resident Inspector, and a full-time Resident Secretary.

The majority of inspection effort conducted by the Midland Section was related to the soils remedial work. This work is described in Sections B.1.a. and b. of this report.

b. Stone and Webster Assessment of the Soils Remedial Work

The third party independent assessment team reported to the site on September 20, 1982. Since that time, reports have been sent to the Resident Inspector office. A review of these reports reveal no significant issues have been identified. These reports and Nonconformance Identification Reports are enclosed as attachment A to this report.

D. COMMUNICATIONS

1. Enforcement Meetings

None

2. Management Meetings

- August 11, 1982 Meeting with CPCo Management regarding soils remedial work taking place without prior staff authorization. Considered a potential violation of a Board Order.
- August 26, 1982 & September 2, 1982 Meeting between CPCo Senior Management, D. Eisenhut, and J. G. Keppler to discuss NRC's concerns with Midland and possible recommended solutions.
- September 8, 1982 Meeting with CPCo management, NRR, and Region III to discuss Consumer's draft proposal for a third party independent assessment. No conclusions reached. Licensee was advised to submit their proposal formally.
- September 15, 1982 Meeting between Region III and CPCo lawyers to establish when NRC investigation of GAP allegations would be completed.
- September 28, 1982 Meeting between the Midland Inspection Site Team and members of Stone & Webster and Consumers Power Company to introduce the Third Party Independent Assessment Team for the remedial soils work.
- October 29, 1982 Meeting in Ann Arbor, Michigan between Region III, Region IV, and Bechtel management to discuss NRC concerns with Bechtel performance and recommended solutions.

3. Public Meetings

- August 5, 1982 Meeting in Midland, Michigan between Region III and CPCo Management to discuss disagreements regarding the Systematic Assessment of Licensee Performance (SALP) report and CPCo's May 17, 1982, response to this report.
- September 29, 1982 Meeting in Midland, Michigan between Region III and CPCo Management regarding the requalification and certification of all Bechtel QC personnel at Midland.

October 25, 1982

Meeting in Bethesda, Maryland between NRR, Region III, CPCo Management, and CPCo contract personnel to discuss third party independent assessment.

4. Other Significant Meetings

None

STONE & WEBSTER ENGINEERING CORPORATION



245 SUMMER STREET, BOSTON, MASSACHUSETTS

ADDRES ALL CORRESPONDENCE TO P.O. BOX 2325 BOSTON, MASS. 02107

W. U. TELEX 84 0001
94 0977

BOSTON
NEW YORK
PHILADELPHIA, PA.
DENVER
CHICAGO
HOUSTON
MEMPHIS, TENNESSEE
SAN DIEGO
WASHINGTON, DC

DESIGN
CONSTRUCTION
REPORTS
EXAMINATIONS
CONSULTING
ENGINEERING

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

September 29, 1982

J.C.No. 14358.06
Ref. MPR-1

Attention Mr. R. Cook

Dear Sir:

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

A copy of the Independent Assessment of the Auxiliary Building Underpinning Weekly Report No. 1 for the period September 19 through 26, 1982, is enclosed with this letter.

If you have any questions with respect to this report, please contact me at (617) 489-2067.

Very truly yours,

A. Stanley Lucks
Project Manager

Enclosure

ASL:ch

~~8212140077~~

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

Weekly Report No. 1

September 19 through 26, 1982

Personnel on Site

Stone & Webster Engineering Corporation (SWEC)

W. E. Kilker	9/20/82-9/26/82
P. Barry	9/20/82-9/23/82
L. T. Rowan	9/20/82-9/24/82
E. Holsinger	9/20/82-9/26/82
A. Scott	9/20/82-9/26/82
A. S. Lucks	9/21/82-9/23/82

Parsons, Brinkerhoff, Quade, & Douglas (PBQD)

P. Parish	9/21/82-9/24/82
J. Ratner	9/22/82-9/24/82

Activities

This report summarizes the first week of activities and observations of the SWEC independent assessment team (including the PBQD personnel). The team, which at the present time consists of seven engineers representing Geotechnical, Structural, Construction, and Quality Assurance disciplines, arrived at the site between September 20 and September 22.

The assessment team has established separate on-site office space and has contracted for clerical assistance.

Introductions of all team members were made to on-site personnel representing Bechtel Engineering and Construction; Consumers Power Company Quality Assurance and Quality Control; Wiss, Janney & Elstner (WJ&E) Instrumentation Monitoring; and Mergentime Construction. Tours and briefings of the various areas and activities related to the underpinning were given throughout the week at the request of the assessment team. Included in these tours and briefings were the in-place access shafts and FIVP superstructure supports, the deep-seated benchmarks and relative motion measurement stations, the extensometer and strain gage instrumentation installations, the crack mapping, the WJ&E instrumentation monitoring and data recording station, the lagging and reinforcing bar fabrication shops, and the material testing laboratory.

Also, the assessment team periodically observed the work on the mock-up pier (located near the Outage Building) and the jacking stand mock-up (located adjacent to the lagging fabrication shop). All lagging and shoring were in place on the mock-up prior to the team's arrival on site, but observations

were made of the reinforcement installation and the placement of concrete in the lower half of the pier. Three members of the assessment team entered the pier for firsthand observations of the installation. The Quality Control activities and documentation prepared prior to release for concrete placement were described and/or provided as requested by the team members.

Daily meetings were held starting September 21 between personnel representing the assessment team, Bechtel Engineering and Construction, and Consumers Power Company Engineering and Quality Assurance. These meetings provided a format for the assessment team to request information and clarification as well as to discuss observations.

Members of the team have read the Summary of Soils-Related Issues Report and are reviewing applicable specifications, drawings, construction, and Quality Control procedures, instrument monitoring procedures, and plant Quality Assurance documents.

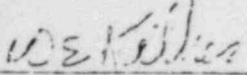
An assessment team Project Manual has been prepared that includes the Project Organization Quality Assurance Plan and reporting and documentation procedures.

Meetings

<u>Date</u>	<u>Represented</u>	<u>Purpose</u>
9/20/82	Stone & Webster Consumers Power Co. Bechtel Mergentime	Introduction to Site Personnel
9/21/82 through 9/25/82	Stone & Webster Parsons Consumers Power Co. Bechtel	Daily Meeting

Observations

The assessment team received full cooperation of on-site personnel. Independent office space and telephone communication have been provided. Consumers Power Company and Bechtel personnel have complied with team requests for access to existing installations, briefings, documents, and records.


Project Engineer


Project Manager

B

STONE & WEBSTER ENGINEERING CORPORATION



245 SUMMER STREET, BOSTON, MASSACHUSETTS

ADDRESS ALL CORRESPONDENCE TO P.O. BOX 2325, BOSTON, MASS. 02107

W. U. TELEX 94-0001
94-0977

BOSTON
NEW YORK
CHERRY HILL, N.J.
DENVER
CHICAGO
HOUSTON
PORTLAND, OREGON
WASHINGTON, D.C.

DESIGN
CONSTRUCTION
REPORTS
EXAMINATIONS
CONSULTING
ENGINEERING

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

October 12, 1982

J.O.No. 14358
Ref. MPR-2

Attention Mr. R. Cook

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

A copy of the Independent Assessment of the Auxiliary Building Underpinning Weekly Report No. 2 for the period September 27 through October 3, 1982, is enclosed with this letter.

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

for A. Stanley Lucks
Project Manager

Enclosure

ASL:pms

8312140101

BX214358-2

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

Weekly Report No. 2

September 27 through October 3, 1982

Personnel on Site

Stone & Webster Engineering Corporation (SWEC)

W. E. Kilker	9/27/82-10/1/82
P. Barry	9/27/82-10/1/82
L. T. Rouen	9/27/82-10/1/82
B. Holsinger	9/27/82-10/1/82
A. Scott	9/27/82-10/1/82
A. S. Lucks	9/27/82-9/29/82

Parsons, Brinkeroff, Quade, & Douglas (PBQD)

P. Parish	9/27/82-10/1/82
J. Ratner	9/29/82-10/1/82

Activities

The assessment team continued their review of the reports, specifications, drawings and procedures in order to gain familiarity with the initial phases of the pending underpinning work. The review concentrated on issued excavation, lagging, ground stabilization and concrete placement procedures. Discussions to resolve any questions concerning these procedures were held with Bechtel and Consumers Power site personnel. The plant QA program and Quality Control procedures on concrete and reinforcement were reviewed by QA team members.

The Assessment team and representatives of Consumers Power Company met with NRC representatives. The role of the assessment team and the interaction with the various site groups, and the methods of reporting the team findings were discussed in this meeting.

Two of the team members attended a public meeting of the NRC and Consumers Power Company. The discussion focused on the establishment of the Midland Plant QA program under Consumers Power Company administration and control and the certification of QC inspectors under the Consumers Power Company program.

Meetings Attended

<u>Date</u>	<u>Represented</u>	<u>Purpose</u>
9/28/82	Stone & Webster Consumers Power Co. U.S. Nuclear Regulatory Commission	Introduction of USNRC and Assessment Team. Discus- sion of Assessment Team's role.
9/29/82	Stone & Webster Bechtel USNRC Public	Public Meeting - Discussion of QA Administration and QC Certification.
9/30/82	Stone & Webster Consumers Power Co. Bechtel	Presentation of Underpinning model.
10/1/82	Stone & Webster Consumers Power Co. Bechtel Mergentime	Weekly Soils Review Meeting
9/27/82 through 10/1/82	Stone & Webster Consumers Power Co. Bechtel	Daily Meeting

Observations

The Assessment Team has continued to receive cooperation of on-site personnel. Team members observations, questions or suggestions have been given prompt and complete attention by the appropriate site personnel.

Wayne Kilbee
Project Engineer

Nani T. Georgan
for Project Manager

STONE & WEBSTER ENGINEERING CORPORATION



245 SUMMER STREET, BOSTON, MASSACHUSETTS

ADDRESS ALL CORRESPONDENCE TO P.O. BOX 2325, BOSTON, MASS. 02107

W U TELEX 94-0001
94-0977

BOSTON
NEW YORK
CHERRY HILL, N.J.
DENVER
CHICAGO
HOUSTON
PORTLAND, OREGON
WASHINGTON, D.C.

DESIGN
CONSTRUCTION
REPORTS
EXAMINATIONS
CONSULTING
ENGINEERING

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

October 13, 1982

J.O.No. 14358
Ref. MPR-3

Attention Mr. R. Cook

RE: DOCKET NO. 50-329/330
MIDLAND PLANT - UNITS 1 AND 2
INDEPENDENT ASSESSMENT OF AUXILIARY BUILDING UNDERPINNING-
REPORT NO. 3

A copy of the Independent Assessment of the Auxiliary Building Underpinning Weekly Report No. 3 for the period October 3 through October 9, 1982, is enclosed with this letter.

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

A. Stanley Lucks
A. Stanley Lucks
Project Manager

Enclosure

ASL:mmm

4312140104

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

Weekly Report No. 3

October 3 through October 9, 1982

Personnel on Site

Stone & Webster Engineering Corporation (SWEC)

W. E. Kilker	10/5/82-10/8/82
P. Barry	10/4/82-10/8/82
L. T. Rouen	10/4/82-10/8/82
B. Holsinger	10/5/82-10/8/82
A. Scott	10/4/82-10/8/82

Parsons, Brinkerhoff, Quade, & Douglas (PBQD)

P. Parish	10/4/82-10/8/82
J. Ratner	10/4/82-10/8/82

Activities

The start of the underpinning work has been delayed pending the recertification of the Soils Remedial Quality Control Inspectors. In the interim, the Assessment team members have completed the review of several of the construction specifications and procedures associated with the initial phases of the underpinning work. Team member questions or observations have been presented to site personnel for resolution.

Several of the team members toured the off-site concrete batch plant and received a briefing on the plant lay-out and production procedures. A general interest tour of the Auxiliary Building and Reactor Containment Structure was given to all of the team members by site engineers.

Observations were made of the underpinning contractor performing routine back-packing maintenance with sand and excelsior on the access shafts' lagging.

Meetings Attended

<u>Date</u>	<u>Represented</u>	<u>Purpose</u>
10/8/82	Stone & Webster Consumers Power Co. Bechtel Mergentime	Weekly Soils Review Meeting
10/4/82 through 10/8/82	Stone & Webster Consumers Power Co. Bechtel	Daily Meeting

Observations

Familiarization with the specifications, drawings, and construction procedures associated with the initial phase of construction is generally complete. Observations and questions from the team members on the construction documents have been discussed with site personnel.

Wayne Kilburn
Project Engineer

Nuri T. Genger
for Project Manager

STONE & WEBSTER ENGINEERING CORPORATION

245 SUMMER STREET, BOSTON, MASSACHUSETTS

ADDRESS ALL CORRESPONDENCE TO P.O. BOX 2325, BOSTON, MASS. 02107

W. U. TELEX 94-0001
94-0977



BOSTON
NEW YORK
CHERRY HILL, N.J.
DENVER
CHICAGO
HOUSTON
PORTLAND, OREGON
SAN DIEGO
WASHINGTON, D.C.

DESIGN
CONSTRUCTION
REPORTS
EXAMINATIONS
CONSULTING
ENGINEERING

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

October 18, 1982

J.C.No. 14358
Ref. MPR-4

Attention Mr. R. Cook

RE: DOCKET NO. 50-329/330
MIDLAND PLANT - UNITS 1 AND 2
INDEPENDENT ASSESSMENT OF AUXILIARY BUILDING UNDERPINNING
REPORT NO. 4

A copy of the Independent Assessment of the Auxiliary Building Underpinning Weekly Report No. 4 for the period October 10 through October 16, 1982, is enclosed with this letter.

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

A. Stanley Lucks
Project Manager

Enclosure

ASL:ck

4312140106

BX214358-2

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

Weekly Report No. 4

October 10 through October 16, 1982

Personnel on Site

Stone & Webster Engineering Corporation (SWEC)

W. E. Kilker	10/12/82-10/15/82
P. Barry	10/12/82-10/15/82
L. T. Rouen	10/11/82-10/15-82
B. Holsinger	10/11/82-10/15/82
A. Scott	10/11/82-10/15/82

Parsons, Brinckerhoff, Quade, & Douglas (PBQD)

J. Ratner	10/11/82-10/15/72
-----------	-------------------

Activities

The Assessment Team completed the review of all construction specifications and procedures associated with the initial phases of the underpinning. Familiarization with the drawings and Quality Assurance/Quality Control procedures continued. Discussions with site personnel were held to resolve questions and observations on the various construction documents.

Team members read the portions of the NRC's Supplemental Safety Evaluation Report No. 2 applicable to the Auxiliary Building Underpinning.

The team members attended the site Soils Training Classes on quality plans, soils work permits and coordination forms.

<u>Meetings Attended</u>	<u>Represented</u>	<u>Purpose</u>
10/11/82 through 10/15/82	Stone & Webster Consumers Power Bechtel	Daily Meetings
10/14/82 and 10/15/82	Stone & Webster Consumers Power Bechtel Mergentime	Soils Remedial Training Program Courses
10/15/82	Stone & Webster Consumers Power Bechtel Mergentime	Weekly Soils Review Meeting

Observations - None

W E Kilker
Project Engineer

Alb...
Project Manager

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

STONE AND WEBSTER ENGINEERING CORPORATION

NONCONFORMANCE IDENTIFICATION REPORT

DATE OF NONCONFORMANCE: 10/21/82 NIR Number 1

IDENTIFICATION/LOCATION OF ITEMS: Procedure for Mechanical Splicing of Reinforcement (MCP 16.000; Rev. 3.)

DESCRIPTION OF NONCONFORMANCE: Technical Specification for Underpinning of Auxiliary Building and Feedwater Isolation Valve Pits (para 11.5.3-g) requires subcontractor's procedure for Mechanical Splicing of Reinforcement to provide a method of mechanically locking the position splices.

The Mergentime Procedure does not provide for mechanically locking splices.

INITIATOR: <i>L.T. Green</i>	DATE: 10/21/82	PROJECT MANAGEMENT CONCURRENCE: <i>A. S. Locke</i>
---------------------------------	-------------------	---

CORRECTIVE ACTION BY:
(IDENTIFY ORGANIZATION TAKING CORRECTIVE ACTION)

INITIATOR CONCURRENCE:	PROJECT MANAGEMENT CONCURRENCE:	DATE:
------------------------	---------------------------------	-------

STONE AND WEBSTER ENGINEERING CORPORATION

NONCONFORMANCE IDENTIFICATION REPORT

DATE OF NONCONFORMANCE: October 28, 1982 NIR Number 2

IDENTIFICATION/LOCATION OF ITEMS: Technical Specification for Underpinning of Auxiliary Building and Feedwater Isolation Valve Pits, and associated C1400 Series Drawings, located at MPQAD and QC,

DESCRIPTION OF NONCONFORMANCE: The MPQAD and QC controlled copies of the above Specification and Drawing are missing the following change documents:

QC's - 1) Specification - Specification Change Notice (SCN) No. 12002, 12003, and 12004.

QC and MPQAD 2) Drawing C1424-2 - Drawing Change Notice (DCN) No. 7 Field Change Request (FCR) - No. C4743 and C4485.

INITIATOR:

Barry L. Holsinger
Barry L. Holsinger

DATE:

October 28, 1982

PROJECT MANAGEMENT CONCURRENCE:

Wynne Killebrew for A.S. Locke

CORRECTIVE ACTION BY:

(IDENTIFY ORGANIZATION TAKING CORRECTIVE ACTION)

INITIATOR CONCURRENCE:

PROJECT MANAGEMENT CONCURRENCE:

DATE:

STONE & WEBSTER ENGINEERING CORPORATION



245 SUMMER STREET, BOSTON, MASSACHUSETTS

ADDRESS ALL CORRESPONDENCE TO P.O. BOX 2325, BOSTON, MASS. 02107

W U. TELEX 940001
940977

BOSTON
NEW YORK
CHERRY HILL, N.J.
DENVER
CHICAGO
HOUSTON
PORTLAND, OREGON
WASHINGTON, D.C.

DESIGN
CONSTRUCTION
REPORTS
EXAMINATIONS
CONSULTING
ENGINEERING

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

October 27, 1982

J.O.No. 14358
Ref. MPR-5

Attention Mr. R. Cook

RE: DOCKET NO. 50-329/330
MIDLAND PLANT - UNITS 1 AND 2
INDEPENDENT ASSESSMENT OF AUXILIARY BUILDING UNDERPINNING
REPORT NO. 5

A copy of the Independent Assessment of the Auxiliary Building Underpinning Weekly Report No. 5 for the period October 17 through October 23 1982, is enclosed with this letter.

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

A. Stanley Lucks
Project Manager

Enclosure

ASL:nb

~~8312140109~~

Weekly Report No. 5

October 17 through October 23, 1982

Personnel on Site

Stone & Webster Engineering Corporation (SWEC)

W.E. Kilker	10/18 - 10/20
P. Berry	10/18 - 10/22
L.T. Rouen	10/18 - 10/22
B. Holsinger	10/20 - 10/22
A. Scott	10/20 - 10/22

Activities

The focus of the Assessment Team effort was the disposition of numerous questions that had been raised over the past 3 weeks with respect to the pending underpinning construction specifications, drawings and procedures. To this end, the team members had meetings and discussions with site engineering and construction personnel and resolved the majority of the items. Pending items will be resolved within the next two weeks.

Team Members attended a critique meeting on the placement of reinforcing and concrete in the mock-up pier. The team was also represented at discussions of recently recorded settlement data.

Meetings Attended

<u>Date</u>	<u>Represented</u>	<u>Purpose</u>
10/18 through 10/22	Stone & Webster Consumers Power Bechtel	Daily Meeting
10/19	Stone & Webster Consumers Power Bechtel Mergentime	Settlement Monitoring Records
10/19	Stone & Webster Consumers Power Bechtel Mergentime	Critique of Mock-Up Pier- Reinforcing Steel and Concrete Placement
10/20	Stone & Webster Bechtel Mergentime	Discussion of Excavation and Lagging Procedure
10/20	Stone & Webster Bechtel Mergentime	Training Sessions on Excavation and Lagging, Jacking, and Soil Stabilization

Meetings Attended

<u>Date</u>	<u>Represented</u>	<u>Purpose</u>
10/22	Stone & Webster Bechtel	Resolution of Observations and Questions on Con- struction Specifications and Procedures

Observations

The Assessment Team has completed the review of the reports and construction documents applicable to the initial phase of the underpinning work. Most questions have been resolved by discussion with site personnel.

The team will, commencing October 25, scale down it's presence on the site until actual start of construction.

Nonconformance Identification Reports

NIR No. 1 - Issued 10/21/82 - The Mergentime Procedure for splicing reinforcing bars did not address a specification requirement.

Wayne Killian
Project Engineer

W. Ken L.S. Buehler
Project Manager

MIDLAND MONTHLY STATUS REPORT

Midland Site Inspection Team efforts at the Midland Construction Site during the month of November were concentrated on the completion of the Diesel Generator Building inspection. The inspection was completed on November 25 and the inspection report is currently being written. Significant inspection findings are being evaluated by the Region III staff.

Remedial soils work continues based on a work agreement between the NRC and Consumers Power Company. Auxiliary building underpinning remains halted pending resolution of the independent third party assessment effort.

The licensee continued the reinspection of 100% of Class 1E cables installed or partially installed. No further underrated or undersized cables have been found as of the end of the status report period.

A 100% reinspection of all hangers installed in CY 1980 and a sample reinspection of hangers installed after January 1, 1982 is continuing by the licensee.

All safety related welding on the heating, ventilating and air conditioning (HVAC) was stopped November 30, 1982 after the licensee determined that the Quality Assurance Program for welder certification and procedure qualification was inadequate. Zack Company, the HVAC contractor, discontinued all welding on safety related HVAC systems, laying off 151 craft workers.



**Consumers
Power
Company**

James W Cook
Vice President - Projects, Engineering
and Construction

General Offices: 1945 West Parnell Road, Jackson, MI 49201 • (517) 788-0453

December 6, 1982

James G Keppler
Regional Administrator
US Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

PRINCIPAL STAFF			
✓ PA	(1)	OI	
D/PA		FNF	
		SP 021013 ✓	
		PAC	
		SLO	
ML			
OL		FILE	✓

MIDLAND ENERGY CENTER PROJECT -
SOILS
START CONSTRUCTION OF PIER 12 -
FILE 0485.16 SERIAL 20262

- REFERENCE 1) J W COOK LETTER OF SEPTEMBER 17, 1982 TO H R DENTON AND J G KEPPLER,
SERIAL 18845
- 2) D B MILLER LETTER OF NOVEMBER 24, 1982 TO W D SHAFER, SERIAL CSC-6437
REGION III

This letter responds to recent discussions with Region III regarding the resumption of construction of the soils remedial project, specifically piers 12 East and 12 West, and documents Consumers Power Company's implementation of the commitments listed in Reference 1 and overall readiness to resume construction.

In Reference 1, seven new commitments were made in order to enhance the implementation of the overall quality program and performance of the job with regard to the soils remedial work. The following is a listing of the commitments and discussion of their status:

1. Retaining a third party to independently assess the implementation of the auxiliary building underpinning work.

Status: Stone and Webster and Parsons, Brinckerhoff, Quade and Douglas are on site, are implementing the independent assessment program, and are fully prepared to assess underpinning construction activities.

2. Integrating the soils QA and QC functions under the direction of MPQAD.

Status: The soils quality functions have been integrated under the direction of MPQAD. QC inspection personnel are being

oc1182-3219a112

8212140367

DEC 9 1982

recertified in accordance with MPQAD procedure 3M-1. QC inspectors necessary to start Pier 12 are qualified. A certification schedule has been developed to insure that the required inspectors will be available to support construction activities.

3. Creating a "Soils" project organization with dedicated employees and a single-point accountability to accomplish all work covered by the ASLB order.

Status: The soils team under the direction of J A Mooney is in place and is in charge of all work covered under the April 30, 1982 ASLB order;

4. Establishing new and upgraded training activities, including a special quality indoctrination program, specific training in underpinning activities, and the use of a mock-up test pit for underpinning construction training.

Status: The training program has been upgraded and personnel involved in the soils remedial work have received the appropriate training. The pier mock-up has been completed and procedural modifications as a result of the mock-up work have been incorporated into the specific construction procedures of piers 12 E/W;

5. Developing a Quality Improvement Program (QIP), specifically for soils remedial work.

Status: The QIP Program manual for soils was issued on September 24, 1982. In addition, supervisory orientation sessions have been initiated;

6. Increasing senior management involvement in the soils remedial project through weekly, on-site management meetings wherein both work progress and quality activities are reviewed.

Status: The on-site meetings are held with management involvement as noted;

7. Improving systems for tracking of and accounting for design commitments.

Status: The commitment list for Piers 12 E/W and for work through the end of the year has been issued. The total commitment list is in review and will be issued prior to December 22, 1982;

In addition to the specific commitments above, the following is the status of related items (numbering system continued from above) for work on Piers 12 East and 12 West:

8. The engineering specifications have been issued for construction (with changes from the mock-up incorporated as noted in 4 above);

- 9. The engineering drawings have been issued for construction (with changes from the mock-up incorporated as noted in 4 above);
- 10. The subcontractors construction procedures have been issued for construction (with changes from the mock-up incorporated as noted in 4 above);
- 11. The PQCI's and PIPR's have been issued based on Item 10 above;

Based on the discussion outlined above, CP Co believes that the soils program has been thoroughly and critically evaluated and that all prerequisites for successful implementation of Piers 12 East and 12 West have been accomplished. The Company's program, with the initial overview from the independent implementation assessment team, and the continuing overview by the NRC staff and management should provide adequate assurance that the remedial soils activities will be successfully implemented.

Accordingly Consumers Power Company requests authorization to proceed with the work specified in Reference 2 which will specifically allow the start of Pier 12 West followed one week later by the start of Pier 12 East.

Consumers Power Company

By James W Cook
James W Cook

Sworn and subscribed to before me on this 6th day of December, 1982.

Barbara R. Bunker
Notary Public, Jackson County, Mich

My commission expires September 8, 1984

JWC/JRS/jlh

CC RJCook, Midland Resident Inspector
DSHood, US NRC
WDShafer, US NRC, Region III



Consumers
Power
Company

Corrected Copy
12/9/82

James W Cook
Vice President - Projects, Engineering
and Construction

General Offices: 1945 West Parnell Road, Jackson, MI 49201 • (517) 788-0453

December 3, 1982

H R Denton, Director
Office of Nuclear Reactor Regulation
Att: Division of Licensing
US Nuclear Regulatory Commission
Washington, DC 20555

MIDLAND NUCLEAR COGENERATION PLANT
DOCKET NOS 50-329 AND 50-330
QUALIFICATION OF INSPECTION, EXAMINATION AND TESTING
AND AUDIT PERSONNEL FOR THE MIDLAND PROJECT
FILE: 0.4.10 SERIAL: 19094

- References:
- (1) E G Adensam (NRC) letter to J W Cook, Same Subject, dated October 5, 1982
 - (2) CPCo CPC-1-A, "Quality Assurance Program Manual for Nuclear Power Plants, Volume I, Policies"
 - (3) A B Davis (NRC) letter to J W Cook, Re: QC Training Program and Written Exams for Remedial Soils, dated October 28, 1982

Reference 1 asked for additional information on Consumers Power's position in regard to Regulatory Guide 1.58, Revision 1. This letter responds only for the Midland Project for certification of personnel to the enclosed Procedure B-3M-1. The procedure was issued October 25, 1982 and is utilized for all new certifications in the Midland Project Quality Assurance Department (MPQAD) and for recertification or new certification of Bechtel Quality Control Engineers utilized on the Midland Jobsite after February 1, 1983. The specific requests are repeated below along with our response.

1. Requested Information

"Describe the qualification requirements of those personnel responsible for reviewing and approving inspection, examination and test procedures and of evaluating the adequacy of such procedures to accomplish the inspection, examination and test objectives. (See Position C.5)"

CPCo Response

In regard to Level III personnel capabilities, Section C.5 states; "In addition, the individual should be capable of reviewing and approving inspection, examination, and testing procedures and of evaluating the adequacy of such procedures to accomplish the inspection, examination, and test objectives." Policy No 2 of our approved Topical Report (Reference 2) provides the following "Exception/Interpretation"; "While a Level III

6212098006
OC1182-0014A-MP01

individual should be capable of reviewing and approving inspection, examination and testing procedures and of evaluating the adequacy of such procedures to accomplish the inspection, examination and test objectives, this is not construed by Consumers Power Company as requiring personnel who review, approve or evaluate such procedures to be certified as Level III personnel."

Both the Bechtel and Consumers programs require that the inspection planning authorized for use at the Midland Jobsite be approved by both the inspection agency and by MPQAD (Quality Assurance Engineering function). The programs require that supervisory level personnel provide the final approvals for the inspection plans. For the most part, these individuals have been certified as either Level II or III.

The program for certification of Level III personnel is consistent with Position C.5. The minimum education and experience requirements for such personnel are identical to the requirements stated in Section 3.5.3 of ANSI N45.2.6-1978. These individuals must demonstrate proficiency in writing inspection plans. They must also demonstrate a thorough understanding of the quality control program requirements by successfully passing a written examination.

Personnel who evaluate inspection, examination and testing procedures as part of the independent evaluation process of an audit are qualified and certified to the requirements of NRC Regulatory Guide 1.146, "Qualification of Quality Program Audit Personnel for Nuclear Power Plants."

2. Requested Information

"Describe in more detail the extent to which the procedures and record results of written, oral and on-the-job performance demonstration tests are documented and determined acceptable. (See Position C.10)"

CPCo Response

Section 5.7 of MPQAD Procedure B-3M-1 describes in detail the written examinations and performance demonstration tests used to determine initial capability or to recertify inspection personnel. The individual record of performance tests are maintained along with the answer sheets for each written examination.

New employees who are candidates for inspection certification are being reviewed to assure that they will meet at least the minimum education and experience recommendations stipulated by Section 3.5 of ANSI N45.2.6 for the certification level for which they are candidates. Thus, for these candidates, Position C.10 is not applicable.

Procedure B-3M-1 was reviewed by the NRC Region III staff. Their concurrence (Reference 3) on its content was obtained prior to their authorization for CPGO to commence remedial soils QC requalification activities.

/s/ J W Cook

JWC/WRB/lr

Enclosure: Midland Project Quality Assurance Department Procedure
No B-3M-1, Rev 1, dated 10/25/82, "Qualification and
Certification of Inspection and Test Personnel"

CC: RJCook, NRC Resident Inspector, Midland Site
WShafer, NRC Reg III
RGardner, NRC Reg III
JGKeppler, NRC Reg III
RHernan, NRC Office of NRR

CONSUMERS POWER COMPANY
Midland Units 1 and 2
Docket No 50-329, 50-330

Letter Serial 19094 Dated December 3, 1982

At the request of the Commission and pursuant to the Atomic Energy Act of 1954, and the Energy Reorganization Act of 1974, as amended and the Commission's Rules and Regulations thereunder, Consumers Power Company submits information regarding the implementation of the Consumers Power Company Quality Program for the Midland Plant.

CONSUMERS POWER COMPANY

By /s/ J W Cook
J W Cook, Vice President
Projects, Engineering and Construction

Sworn and subscribed before me this 6 day of December, 1982

/s/ Barbara P Townsend
Notary Public
Jackson County, Michigan

My Commission Expires September 8, 1984



Consumers
Power
Company

MIDLAND PROJECT
QUALITY ASSURANCE
DEPARTMENT PROCEDURE

QUALIFICATION AND CERTIFICATION OF
INSPECTION AND TEST PERSONNEL

Proc No B-3M-1
Page 1 of 14
Revision 1
Date 10/25/82

1.0 PURPOSE

To establish the requirements, responsibilities and procedure for the selection, training, qualification and certification of personnel, under the direction of the Midland Project Quality Assurance Department (MPQAD), who perform:

- Primary inspection/test/test verification
- Overinspection/test/test verification
- Source and receipt inspection/test

hereinafter referred to as "inspection".

UNCONTROLLED COPY

2.0 SCOPE

This procedure applies to MPQAD personnel who perform inspection or overinspection.

This procedure does not apply to any NDE personnel. (The corresponding procedure for NDE personnel is MPQAD Procedure B-4M.) This procedure also does not apply to firms engaged in subcontract work (eg, B&W Construction Company) which have their own personnel certification procedures. (Paragraph 5.1.4 addresses this subject.)

3.0 DEFINITIONS

- 3.1 Qualification - The characteristics or abilities gained through education/training or experience, or both, that enable an individual to perform inspection and test functions.
- 3.2 Certification - The action of determining, verifying and attesting in writing, as to the qualifications of a person to perform inspection and test functions.
- 3.3 PQCI - Project Quality Control Instruction which is prepared and implemented in accordance with the requirements of the Bechtel Quality Control Notices Manual.
- 3.4 PIP - Project Inspection Plan which is prepared and implemented in accordance with the requirements of MPQAD Procedure E-1M.
- 3.5 FIR - Field Inspection Report which is prepared and implemented in accordance with the requirements of the Bechtel Quality Control Notices Manual.



Consumers
Power
Company

MIDLAND PROJECT
QUALITY ASSURANCE
DEPARTMENT PROCEDURE
QUALIFICATION AND CERTIFICATION OF
INSPECTION AND TEST PERSONNEL

Proc No B-3M-1
Page 3 of 14
Revision 1
Date 10/25/82

Project Function	Level		
	L-I	L-II	L-III
Reporting inspection and testing results		X	X
Supervising equivalent or lower level personnel		X	X
Certifying lower level personnel			X
Evaluating the adequacy of specific programs used to train and test inspection and testing personnel			X

- 5.1.2 The Manager, MPQAD shall certify Level III persons when he determines that these persons are qualified in accordance with the requirements of this procedure. Level III personnel, certified prior to issuance of this procedure, may be certified by the Manager, MPQAD based on documented evaluation of the candidates qualifications.
- 5.1.3 Within their disciplines, Level III personnel shall certify Level I and II persons in accordance with the requirements of this procedure. Level II personnel may be utilized to examine Level I or II candidates during performance demonstrations. Certifications, for inspectors performing inspections in areas such as receiving, storage and maintenance, may be given by any Level III person.
- 5.1.4 Level III personnel shall verify that inspection and test personnel who are employees of firms engaged in site subcontracted work (eg B&W, Construction Company and GEO) are certified by the firm consistent with the scope of the inspection services.
- 5.1.5 Certified personnel may perform the duties of persons certified to lower levels, but not conversely.
- 5.1.6 Level III personnel shall be certified on a discipline-by-discipline basis, as applicable. Disciplines include Civil, Mechanical, Electrical and Welding.
- 5.1.7 Level III personnel may implement any PQCI, PIP or FIR within the discipline without being certified specifically to that PQCI, PIP or FIR.



Consumers
Power
Company

MIDLAND PROJECT
QUALITY ASSURANCE
DEPARTMENT PROCEDURE
QUALIFICATION AND CERTIFICATION OF
INSPECTION AND TEST PERSONNEL

Proc No B-3M-1
Page 5 of 14
Revision 1
Date 10/25/82

Qualification Questionnaire, Attachment A, and submit it with a copy of his resume to the Discipline Supervisor or Level III. When a candidate is to be certified Level III, the questionnaire and resume shall be submitted to the Manager, MPQAD.

- 5.3.2 The Discipline Supervisor, Level III person or Manager, MPQAD shall evaluate the completed Questionnaire and resume to determine if the candidate meets the minimum education and general experience requirements contained below. The results of the evaluation shall be documented at the end of the Questionnaire and shall include any factors considered in the evaluation.

5.4 Minimum Education and Experience Requirements

Effective as of the date of issue of this procedure, the minimum education and experience requirements for certification of newly hired candidates shall be as follows:

5.4.1 Level I

1. Two years of related experience in equivalent inspection or test activities, or
2. High school graduation and six months of related experience in equivalent inspection or testing activities, or,
3. Completion of college level work leading to an Associate Degree in a related discipline plus three months of related experience in equivalent inspection or testing activities.

5.4.2 Level II

1. One year satisfactory performance as Level I in the corresponding inspection or test category or class, or
2. High school graduation plus three years of related experience in equivalent inspection, or testing activities, or
3. Completion of college level work leading to an Associate Degree in a related discipline plus one year related experience in equivalent inspection, or testing activities, or



Consumers
Power
Company

MIDLAND PROJECT
QUALITY ASSURANCE
DEPARTMENT PROCEDURE
QUALIFICATION AND CERTIFICATION OF
INSPECTION AND TEST PERSONNEL

Proc No B-3M-1
Page 7 of 14
Revision 1
Date 10/25/82

inspection and measuring equipment is current, that the measuring and test equipment is in proper condition for use, and that the inspection and test procedures are approved.

5.5.2 Level II.

A Level II person shall have all of the capabilities of a Level I person for the inspection or test category or class in question. Additionally, a Level II person shall have demonstrated capabilities in planning inspections and tests; in setting up tests including preparation and set-up of related equipment, as appropriate; in supervising or maintaining surveillance over the inspections and tests; in supervising and examining lower level personnel; in reporting inspection and testing results; and in evaluating the validity and acceptability of inspection and test results.

5.5.3 Level III

A Level III person shall have all of the capabilities of a Level II person for the inspection or test category or class in question. The individual shall also be capable of evaluating the adequacy of specific programs used to train and test inspection and test personnel whose qualifications are covered by this procedure. In addition the individual shall be capable of reviewing and approving inspection and testing procedures and of evaluating the adequacy of activities to accomplish the inspection and test objectives.

5.6 Training

Each candidate for Level I and II certification by MPQAD shall complete the training in both programmatic and technical requirements, as required by the training program. The training program shall be established and maintained by the Training Supervisor, who will obtain input from appropriate MPQAD sections, and be approved by the Manager, MPQAD and the appropriate Level III persons. Training of Level III persons shall be in accordance with Paragraph 5.2. Records of training shall be maintained and shall contain the date of training, the duration, the instructor, the topics covered, and the attendees.



Consumers
Power
Company

MIDLAND PROJECT
QUALITY ASSURANCE
DEPARTMENT PROCEDURE
QUALIFICATION AND CERTIFICATION OF
INSPECTION AND TEST PERSONNEL

Proc No B-3M-1
Page 9 of 14
Revision 1
Date 10/25/82

examination, candidates shall record their answers on separate answer sheets labelled with the code of the examination.

5.7.2.4 After administering the examination, all examination question and answer sheets shall be retrieved by the proctors (those who monitor the examinations) and returned to the Training Supervisor for grading.

5.7.2.5 The graded answer sheet, expected responses and examination questions shall be returned to the appropriate Level III for evaluation. The Level III shall document his evaluation by signing the graded answer sheet. In addition, for those candidates passing the examination, the Level III shall review any missed questions with the candidate to assure he understands the answers. The Level III shall return the graded answer sheet, expected responses and examination questions to the Training-Supervisor. Graded answer sheets shall then be filed in the certification package.

5.7.3 Performance Demonstrations

Each candidate for Level I or II certification shall demonstrate to the examiner his capability to inspect in accordance with the PQCI/PIP and to prepare the inspection reports. The results of the performance demonstration shall be documented on the Performance Demonstration Record (Attachment B).

5.7.4 Examination Requirements

The programmatic examination shall consist of forty questions as a minimum. The technical examination shall consist of a minimum of 80 percent of the technical examination question pool.

The passing scores for the programmatic and technical examinations shall be 80 percent each.

Satisfactory accomplishment of the performance demonstrations shall be indicated by satisfactory completion of each identified check point.



Consumers
Power
Company

MIDLAND PROJECT
QUALITY ASSURANCE
DEPARTMENT PROCEDURE
QUALIFICATION AND CERTIFICATION OF
INSPECTION AND TEST PERSONNEL

Proc No B-3M-1
Page 11 of 14
Revision 1
Date 10/25/82

5.8 Minimum Physical Requirements

Each candidate shall be physically capable of performing his assigned task. He shall be capable, with or without correction, of reading J-1 letters on a standard Jaeger test type chart at a minimum of fifteen inches. (Candidates whose annual eye examination has not expired as of the date of this procedure shall not be required to take a re-examination even though their existing eye examination may have been performed at a minimum of 12" instead of 15". However, their next regularly scheduled annual eye examination shall be accomplished at a minimum of 15".) Each candidate shall, with or without correction, have a minimum far distance vision of 20/40 by the Linear Snellen scale. In addition, each candidate shall be capable of distinguishing the difference between the primary colors on ten of the first eleven plates from an Ishihara Test Book. The vision examinations shall be performed by a professionally qualified individual. Candidates who fail to pass this color test may be given a practical color examination to cover the specific inspection activities. Candidates who demonstrate to the Level III adequate color vision to perform the assigned inspection shall be considered as having acceptable color-vision. The Level III shall document the practical color examination results in a memorandum to the Training Supervisor and attach a copy of the memorandum to the candidates Vision Examination Record, Attachment C.

Results of the examination shall be documented on the Vision Examination Record Form, Attachment C. If corrective lenses are required to pass the examination, they shall be worn during performance of any inspection.

5.9 Certification

The Training Supervisor shall gather the following forms and verify they are properly completed and signed prior to forwarding the forms to the applicable Level III person for review and final certification of the candidate:

- a. Inspection/Test Personnel Qualifications Questionnaire, Attachment A
- b. Resume
- c. Visual Examination Record, Attachment C
- d. Results of the programmatic and PQCI/PIP specific written examinations
- e. Performance Demonstration Record, Attachment B



Consumers
Power
Company

MIDLAND PROJECT
QUALITY ASSURANCE
DEPARTMENT PROCEDURE
QUALIFICATION AND CERTIFICATION OF
INSPECTION AND TEST PERSONNEL

Proc No B-3M-1
Page 13 of 14
Revision 1
Date 10/25/82

5.11 Revocation of Certification

Certification shall be revoked or suspended by the original certifier or MPQAD management (Section Head or higher) at any time for the following reasons:

- 5.11.1 Termination of employment;
- 5.11.2 Failure to pass annual vision tests;
- 5.11.3 Gross or repetitive noncompliance with applicable requirements;
- 5.11.4 Lapse of performance of inspection-related tasks within a discipline for a period of one year or more;

The reason(s) for the revocation shall be documented in a memorandum to the Training Supervisor and actions shall be taken to prevent utilization of the person in the applicable inspection activities.

5.12 Recertification

In order to retain certification, Level I and II personnel shall be recertified by a Level III person every three years based on continuous, satisfactory performance. Recertification shall be documented by completion of the Annual Performance Evaluation Form, Attachment E by the Discipline Supervisor, and completion of a new Personnel Certification Form, Attachment D by a Level III person.

Level III personnel shall be recertified by the Manager, MPQAD every three years based on continuous satisfactory performance. Recertification shall be documented by completion of the Annual Performance Evaluation Form, Attachment E, by the Discipline Supervisor and completion of a new Personnel Certification Form, Attachment D, by the Manager, MPQAD.

5.13 Records

5.13.1 The Training Supervisor shall establish and maintain a personnel file for each certified individual. This file shall contain as a minimum, the following:

- a. Inspection/Test Personnel Qualifications Questionnaire;
- b. Resume;
- c. All Vision Examination Record Forms, including past years;



INSPECTION/TEST PERSONNEL QUALIFICATIONS QUESTIONNAIRE

PROJECTS ENGINEERING
AND CONSTRUCTION
QUALITY ASSURANCE DEPARTMENT

PAGE 1 OF 2

1. NAME _____ EMPLOYEE I.D. NO. _____

2. EDUCATION -

a. High School Graduate/Date _____


b. Junior College/Degree/Date _____


c. Undergraduate - University/Degree/Date _____


d. Graduate - University/Degree/Date _____

3. OTHER CREDENTIALS - List any additional certifications you have attesting to your professional competence in the field of engineering, science or quality assurance issued by a State, National, or Professional society. For example: Professional Engineering registration by State; or ASQC certification as a Quality Engineer.

4. FORMAL INSPECTION/TESTING TRAINING - List any courses, seminars, or other formal training you have completed on the subjects of inspection or testing activities, and the date and length of such training sessions and workshops.

		PERFORMANCE DEMONSTRATION RECORD		PROJECTS ENGINEERING AND CONSTRUCTION QUALITY ASSURANCE DEPARTMENT	
NAME:			EMPLOYEE I.D. NO.:		
EVALUATED FOR LEVEL:		DISCIPLINE:		DATE:	
AS APPLIED TO PROJECT:			REFERENCE DOCUMENTS:		
CHECK POINTS					RATING*
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
REMARKS:					
PERFORMER OF PERFORMANCE DEMONSTRATION:				SIGNATURE DATE - LEVEL II OR LEVEL III:	
SATISFACTORY <input type="checkbox"/>		NOT SATISFACTORY <input type="checkbox"/>			

	<h2 style="margin: 0;">VISION EXAMINATION RECORD</h2>	<p style="font-size: small; margin: 0;">PROJECTS, ENGINEERING AND CONSTRUCTION - QUALITY ASSURANCE DEPARTMENT</p>
	<p style="font-size: small; margin: 0;">EXPERIENCE NO. _____</p>	
<p style="margin: 5px 0;">NEAR DISTANCE VISION*</p>		
	<p style="font-size: small; margin: 0;">LEFT EYE</p>	<p style="font-size: small; margin: 0;">RIGHT EYE</p>
1. NATURAL:	<p>_____ **</p>	<p>_____ **</p>
2. CORRECTED:	<p>_____ **</p>	<p>_____ **</p>
<p style="font-size: x-small; margin: 0;">** ENTER PASS OR FAIL</p>		
<p style="font-size: x-small; margin: 0;">* APPROXIMATE DEFINITION: NATURAL IS UNCORRECTED ABILITY TO READ 20/40 LETTERS IN A STANDARD PAPER'S TEST PLAST AT A DISTANCE OF 18 INCHES.</p>		
<p style="margin: 5px 0;">FAR DISTANCE VISION*</p>		
	<p style="font-size: small; margin: 0;">LEFT EYE</p>	<p style="font-size: small; margin: 0;">RIGHT EYE -</p>
1. NATURAL:	<p>_____ **</p>	<p>_____ **</p>
2. CORRECTED:	<p>_____ **</p>	<p>_____ **</p>
<p style="font-size: x-small; margin: 0;">** ENTER PASS OR FAIL</p>		
<p style="font-size: x-small; margin: 0;">* APPROXIMATE DEFINITION: NATURAL IS UNCORRECTED VISION OF 20/40 BY THE LENSES OF THE EYES.</p>		
<p style="margin: 5px 0;">COLOR VISION*</p>		
<p style="margin: 0;">TYPE OF TEST ADMINISTERED: _____</p>		
COLOR VISION:	<p style="margin: 0;">NORMAL <input type="checkbox"/></p>	<p style="margin: 0;">ABNORMAL <input type="checkbox"/></p>
<p style="margin: 0;">DESCRIBE ANY ABNORMALITIES: _____</p>		
<p style="font-size: x-small; margin: 0;">* APPROXIMATE DEFINITION: ABILITY TO DISTINGUISH DIFFERENCES BETWEEN PRIMARY COLORS IN ONE OF THE TEST PLASTS SALES WITH AN ICHHEMATA TEST PAST IN DISTANCE.</p>		
<p style="font-size: x-small; margin: 0;">EXAMINER'S NAME: _____</p>	<p style="font-size: x-small; margin: 0;">DATE OF EXAMINATION: _____</p>	<p style="font-size: x-small; margin: 0;">EXPERIENCE NO. _____</p>

	PERSONNEL CERTIFICATION LEVEL III	PROJECTS, ENGINEERING AND CONSTRUCTION - QUALITY ASSURANCE DEPARTMENT	
NAME: _____	EMPLOYEE I.D. NO.: _____		
LEVEL OF CERTIFICATION	DISCIPLINE	EFFECTIVE DATE OF CERTIFICATION	RECERTIFICATION DUE
BASIS FOR CERTIFICATION:			
EDUCATION	<input type="checkbox"/>		
GENERAL EXPERIENCE	<input type="checkbox"/>		
SPECIFIC TECHNICAL CAPABILITY	<input type="checkbox"/>		
TRAINING	<input type="checkbox"/>		
JOB PERFORMANCE EVALUATION	<input type="checkbox"/>		
OTHER FACTORS _____			
EXPIRATION OF CERTIFICATION:			
THE ABOVE NAMED INDIVIDUAL IS CERTIFIED TO THE REQUIREMENTS OF WPCAD PROCEDURE _____			
SIGNATURE/MANAGER, WPCAD: _____		DATE: _____	



CONSUMERS
POWER
COMPANY

SA-119-3

INSPECTION/TEST PERSONNEL ANNUAL PERFORMANCE EVALUATION

PROJECTS, ENGINEERING
AND CONSTRUCTION -
QUALITY ASSURANCE DEPARTMENT

IN ACCORDANCE WITH MPQAD PROCEDURE 8-3M, THE PERFORMANCE OF THE CERTIFIED
INDIVIDUAL NAMED BELOW HAS BEEN EVALUATED. THE PERIOD COVERED BY THIS
EVALUATION IS FROM _____ TO _____
(DATE) (DATE)

_____ PERFORMANCE DURING SPECIFIED PERIOD IS
(NAME)
SATISFACTORY BASED ON THE FOLLOWING:

- PERFORMANCE DEMONSTRATION
- PERFORMANCE MONITORING
- VISION EXAMINATION
- PROGRAMMATIC REFRESHER TRAINING
- SPECIFIC TECHNICAL/PQCI/PIPR) REFRESHER TRAINING
- OTHER _____
(EXPLAIN) _____

*MANDATORY

SUPERVISOR SUPERVISOR/DATE



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

Landsman

DEC 03 1982

MEMORANDUM FOR: D. G. Eisenhut, Director, Division of Licensing, NRR
FROM: R. F. Warnick, Acting Director, Office of Special Cases
SUBJECT: RECOMMENDATION FOR NOTIFICATION OF LICENSING BOARD

Enclosed is a Preliminary Notification regarding the substantial reduction in the amount of safety-related work at the Midland site. This reduction is partially in response to NRC findings identified during an October-November, 1982 inspection in the diesel generator building.

Region III has reviewed this information and perceives the issues identified in the enclosure to be material and relevant to the Midland OM/OL proceedings. We recommend that the Midland Licensing Board be notified.

If you have any questions or desire further information regarding this matter, please call me.

RF Warnick

R. F. Warnick, Acting Director
Office of Special Cases

Enclosure: As stated

cc w/encl:

A. B. Davis
W. D. Shafer
R. N. Gardner
R. B. Landsman
R. J. Cook
B. L. Burgess
E. L. Jordan, IE

8212280054

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the staff on this date.

Facility: Consumers Power Company
Midland Nuclear Power Station
Units 1 & 2
Docket Nos. 50-329
50-330
Midland, MI 48640

Licensee Emergency Classification:
____ Notification of Unusual Event
____ Alert
____ Site Area Emergency
____ General Emergency
xx Not Applicable

Subject: MAJOR REDUCTION IN SAFETY-RELATED WORK

Consumers Power Company notified Region III (Chicago) personnel December 2, 1982 that it was substantially reducing the amount of safety-related work at the Midland site.

The manual construction work force has been cut by 1,000, leaving a total of 4,000 licensee and contractor personnel at the site.

Region III performed an inspection in October-November 1982 which identified significant quality assurance and equipment installation concerns in the diesel generator building. Partially in response to the NRC findings, the licensee is developing a new project completion plan to address these concerns and to improve the control of work activities. This plan led to the reduction in work force. The licensee's plan includes reducing most safety-related construction work, recertifying all quality control personnel, and developing a program for a 100 per cent reinspection of all installed safety-related components and structures. Ongoing inspection and maintenance activities, the remedial soils work, and nuclear steam supply system work being performed by Babcock and Wilcox are not affected by the work reduction. The licensee plans to develop engineering and construction teams, each responsible for the completion of one or more safety-systems.

The licensee issued the attached news announcement on December 3, 1982. Region III is responding to news media inquiries.

The State of Michigan will be notified.

Region III personnel at the Midland site were notified of the licensee's actions during a meeting which began at 10:30 a.m. (EST), December 2, 1982. This information is current as of 10 a.m. (EST) December 3, 1982.

Contact: ^{RFW} W. Shafer 384-384-2656 ^{RFW} R. Warnick 384-2599 ^{ARD} A.B. Davis 384-2681

DISTRIBUTION:

H. St. 1024
Chairman Palladino
Comm. Gilinsky
Comm. Ahearne
Comm. Roberts
Comm. Asselstine
SECY
ACRS
CA
PDR

MNBB 1003
EDO
PA
MPA
ELD

Phillips 1004
NRR

Air Rights 1012
SP

E/W 955
IE
OIA
AEOD

INPO 1028
NSAC 1031

Willste 1009
NMSS
RES

MAIL:
ADM:DMB
DOT: Trans Only

Applicable Resident Site 1050

Regions I 1015, II 1033, IV 1018, V 1021 Licensee (Corporate Office) 1052

8212080416

6

NEWS
NEWS
NEWS
NEWS
NEWS

MIDLAND, December 3, 1982 -- Consumers Power Company has initiated a new systems completion plan at the Midland Nuclear Cogeneration Plant. The innovative approach will provide more efficient control over the completion of work at the nuclear plant, according to Consumers Power Company Site Manager, Donald B. Miller.

The Midland Plant is now 85 percent complete.

"We have initiated this completion plan to develop a more detailed assessment of the work remaining to be done on the systems in the auxiliary building, diesel generator building and containment buildings," Miller said. "The program will be carried out by design and test engineers, quality assurance personnel and construction forces who will work as coordinated teams to implement the program."

Another major objective of the plan is to improve the project's performance in meeting the regulations and expectations of the U S Nuclear Regulatory Commission, Miller added. The program was outlined to the NRC at a meeting Thursday.

Miller said implementation of the plan results in the reduction of the manual construction workforce by 1,000, leaving approximately 4,000 people at work on the Midland site. The workforce had been gradually reduced in recent months because of job completion in containment areas but the plan caused a larger layoff.

Miller stated that additional specialized staff will be required to carry out the program, and some of the construction force will be recalled later.

Miller also noted that work will continue on the nuclear steam supply system, the turbine building and miscellaneous systems.

The first phase of the system completion program will be to remove all construction material and temporary equipment from the buildings included in the program. Each facility will then be cleaned, and the system completion teams will carry out their reinspections on an area by area basis.

As each area is reinspected and the results analyzed, the systems completion team will oversee the completion of any needed remaining work. The completed systems will then be turned over to Consumers Power for checkout and startup testing.

Miller said that the systems completion program work will be done in parallel with underground foundation work. The Company has started part of the foundation work, but is awaiting permission from the NRC to complete the underground work. The foundation will resolve the plant's soils compaction problem and add seismic protection to the plant to meet more stringent earthquake protection requirements than were called for in the plant's initial design. Because of the delay in completing the foundation work, the Company announced November 9 that it was re-evaluating the project completion dates and schedules.

~~XXXXXXXXXX~~
#3 #5

D.# 61 #9

10/29/82

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
CONSUMERS POWER COMPANY)	Docket Nos. 50-329 OM & OL
)	50-330 OM & OL
(Midland Plant, Units 1 and 2))	

NRC STAFF TESTIMONY OF R. J. COOK, R. B. LANDSMAN,
R. N. GARDNER AND W. D. SHAFER WITH RESPECT TO QUALITY ASSURANCE

Q.1 Please state your names and positions.

A.1 My name is Ronald J. Cook. I am the Senior Resident Inspector for the NRC at the Midland Plant. I attach a copy of my professional qualifications.

My name is Ross B. Landsman. I am an Inspector for the NRC (Region III) at the Midland Plant. My professional qualifications have previously been submitted in this proceeding.

My name is Ronald N. Gardner. I am an Inspector for the NRC (Region III), assigned to the Midland Plant. My professional qualifications have been previously submitted in this proceeding.

My name is Wayne D. Shafer. I am the Chief, Midland Section, Office of Special Cases for the NRC (Region III). A copy of my professional qualifications is attached.

Q.2 Dr. Landsman and Mr. Gardner, has Region III recently addressed the issue of the qualifications of Bechtel QC Inspectors at Midland? (July 7, 1982 Order, p. 4.)

ALSO 26 PAGES OF INS CE GA REISSUED

A.2 Yes. There were several instances in the past where the qualifications of Bechtel QC inspectors at Midland in the areas of mechanical and electrical work activities were questionable. See, for example, Inspection Reports 82-06⁸¹⁻¹² (Attachment 10, discussed at pages 5-6, infra) and 82-07^{YIN} (Attachment 1). As a result, Region III has urged CPC to take control of the QC activities, including requalifying and recertifying of all Bechtel QC inspectors to Consumers Power Company's standards. CPC has agreed to do so.

Upon witnessing the QC requalification oral exams for the soils remedial work, we determined that the requalification effort was not acceptable. A Confirmatory Action Letter (CAL) was issued on September 24, 1982 (Attachment 1a.).

A public meeting between CPC and the NRC was held on September 29, 1982 to discuss the requalification and recertification of QC personnel involved in the remaining safety-related work at the Midland Plant. During this meeting, the licensee committed to developing a retraining program for QC personnel and to use a combination of written and oral examinations for the QC requalification effort. At the time of this filing, CPC has not submitted its program.

ANY ONE FAILING -
WORK WILL BE REINSPECTED

Q.3 Dr. Landsman and Mr. Gardner, what is your response to the questions concerning the effects of structural movements during the underpinning process, posed by Judge Harbor at Tr. 7122-7128? (July 7, 1982 Order, p. 4.)

A.3 Consumers Power Company's program for systematic detection of and arresting of structure movement is described in Specification 7220-C-200(Q), Revision 0 (Attachment 2).

The protective plan for arresting structure movement is implemented through procedures OP40, Monitoring, Reducing and Reporting (Attachment 3) and OP41, Data Acquisition System Investigation in the Event of Observed Large Movements (Attachment 4) which describe the methods for monitoring and assessing structure movement and load data.

The program and procedures have been reviewed by Region III inspectors and no major concerns were identified.

REPORT ALSO CAL

On August 23, 1982, we conducted an inspection (82-18, pp. 3-4) (Attachment 5) of installed underpinning instrumentation to determine the capabilities of the computerized instrumentation system to monitor and respond to simulated structural movements. We selected three instruments for testing. For each of the selected instruments, baseline data were initially recorded. Then displacement shims were installed and the subsequent computer printout examined to determine the system response to the simulated displacement.

VIOLATION OF BOARD CRDE

An audible alarm condition was noted after the 0.110 inch displacement shim was installed. The subsequent computer printout further identified the alarm condition.

During each of the displacement simulations, the underpinning instrumentation system identified, within the allowable tolerances, the displacement simulated and, when required, the resulting alarm condition.

The results of the tests performed on the selected instrumentation were acceptable. No concerns were identified.

During the underpinning activities, the Bechtel Resident Structural Engineer will evaluate and trend the instrument data. The decision to proceed or not to proceed with the underpinning activities (See Board

question at Tr. 7125) will be made by Bechtel Construction and must be consistent with the acceptance criteria set forth on pp. 2-48 through 2-51 of SSER #2.

Q.4 Dr. Landsman, describe the QA program for soils related activities (July 7, 1982 Order, p. 4.)

A.4 The Quality Assurance Program for remedial soils activities is described in MPQP1 and MPQP2 (Attachment 6). These procedures have been reviewed by the Staff and are addressed in Section 17 of the SSER #2.

*John
dme*

The Region III office will perform periodic inspections of the remedial soils work in progress. The major underpinning activities at pier 12, the first pier to be constructed, will be closely monitored by the Staff and additional critical underpinning activities will not be authorized until the Staff is assured that all quality elements have been met.

Q.5 Dr. Landsman, what is the Staff response to the various nonconformance reports referenced by the Board in its Orders of April 30, 1982 and July 7, 1982?

A.5 The NRC Staff has reviewed NCR #M01-4-2-008 (Attachment 7A), NCR #M-01-9-2-038 (Attachment 7B), NCR #M-01-9-2-051 (Attachment 7C), NCR #4245 (Attachment 7D), NCR-4199 (Attachment 7E). Region III has taken no action regarding these specific nonconformance reports. The Staff recognizes that these reports represent instances where the quality assurance requirements were either not established or not adequately implemented. However, the Staff feels that the Work Authorization Procedure (Attachment H to testimony of James Keppler) as well as

*written
before rerep*

procedures implemented by Bechtel to control excavation on site should ensure that future work activities in the remedial soils area will be accomplished in accordance with the quality requirements.

except for D.O. Building inspection, prop misunderstanding

Q.6 Dr. Landsman, please discuss Staff Inspection Report 82-05 (Attachment 8). (July 7, 1982 Order, p. 4.)

A.6 This inspection report documents an inspection conducted in February and March 1982, by me. I identified one item of noncompliance and one deviation from a commitment as described below.

The item of noncompliance represented a significant weakness in the quality of the procedures being used for the remedial soils work. There were four examples of poor quality assurance ranging from "failure to review and approve" to inadequate procedure content. The significance of this violation was recognized by the assignment of a severity level IV classification.

The deviation addressed in Appendix B of the report identified a failure on the part of the licensee to comply with a commitment to provide additional qualified QA personnel. This commitment was made to me during a previous inspection (Inspection Report 81-12, pp. 16-17) (Attachment 9). It was my assessment that CPC's QA staff was not fully adequate and was judged not to be commensurate with the complexity of the task.

Page three of the inspection report (82-05) details further commitments made by CPC regarding the previously described deviation. This concern, however, is still under review and will be pursued in future inspections. In addition, in the documented exit interview (p. 9

QA personnel

on 82-05). I noted that it was clear that upper management was not playing an active role in conveying the principles of Quality Assurance to the working staff.

Q.7 Dr. Landsman and Mr. Gardner, please discuss Inspection Report 82-06 (Attachment 10). (July 7, 1982 Order, p. 4.)

A.7 This inspection report documents an inspection conducted in March 1982 by us. The report contains two items of noncompliance considered to have a severity level IV significance.

The first noncompliance addresses CPC's failure to apply the Quality Assurance Program commitments to the installation of the underpinning instrumentation. This concern was identified on March 17 through 19, 1982. We determined that the installation work had been initiated on March 11, 1982, one day after CPC had been notified that all remaining underpinning activities were classified as "Q," therefore requiring the application of the Quality Assurance Program.

ISSUANCE OF
OF
QCAL

BOB'S
STATEMENT

The second item of noncompliance addressed inadequate QC inspections in that fifty-five (55) class IE cables were inspected and accepted even though the cables were not correctly routed; and that class IE cables were inspected and accepted after nonconforming cable reel numbers were identified. These problems were identified during overinspections conducted by CPC since May 1981.

The significance of these concerns are twofold. First, the installation of the cables was improper and second, the QC inspections, which are intended to identify improper installation, failed to do so. The second concern reflects on the QC inspectors' ability to perform

inspections. To ensure that there are no other misrouted cables, CPC was directed by Region III to perform a 100% overinspection of all safety related cables.

The concern about QC inspector qualifications is being addressed as described in the response to question 2 of this written testimony.

Q.8 What is the Staff's response to the suggestion in the interim ACRS report of June 8, 1982, that there be a broader assessment of Midland's design adequacy and construction quality. (July 7, 1982 Order, p. 5.)

A.8 Mr. Keppler addresses the third party independent assessment of Midland construction in his testimony.

Q.9 Dr. Landsman, what are the results of the Staff evaluation of drawing 7220-C-45 (July 7, 1982 Order, p. 5.)

A.9 Staff requirements for this drawing were provided by the Staff on May 7, 1982, to Messrs. J. Mooney, J. Schaub and others of CPC. These were:

(1) The seismic Category I retaining wall to the east of the service water pump structure is shown to be located in the non-Q zone. CPCo should review the drawing to provide for Q-listed control in the vicinity of this wall.

(2) The drawing should be revised to provide for Q control of soils activities for the emergency cooling water reservoir (ECWR), the concrete service water discharge lines, and the perimeter and baffle dikes adjacent to the ECWR.

(3) CPC should implement Q controls for two types of situations. The first is that which is intended to occur outside the Q zone of

NON COMPLIANCE
IN S.G.
REPORT

Drawing 7720-C-45, but actually occurs within that zone. The second is that which actually occurs outside the Q zone of Drawing 7720-C-45 but nonetheless may impact safety related structures and systems. Examples include potential removal of fines by dewatering wells, improper location of borings near the Q boundary, and soil excavations at the boundary involving both Q and non-Q areas.

(4) CPCo should re-confirm that no seismic Category I underground utilities extend beyond the Q area bounds of the drawing.

CPC has submitted a revised Drawing 7720-C-45. With respect to (1) revising the drawing to provide Q Controls for the perimeter and baffle dikes adjacent to the ECWR and (2) reconfirmation by CPC that no seismic Category I underground utilities extend beyond the Q areas of the drawing, the Staff does not find the submittal acceptable. With respect to the other requirements for the drawing, mentioned above, the Staff finds the submittal acceptable.

RONALD J. COOK
STATEMENT OF PROFESSIONAL QUALIFICATIONS

My name is Ronald J. Cook. I was born May 24, 1934 at Niles, Ohio. I am employed by the U.S. Nuclear Regulatory Commission as the Senior Resident Inspector at the Midland Nuclear Plant. I graduated from the Ohio State University in 1967 with a Bachelor of Mechanical Engineering degree and again in 1974 with a Master of Science degree.

I have worked with the AEC/NRC since April 1971 and have been the Senior Resident/Resident Inspector at the Midland site since July 1978 with responsibilities for planning, supervising and conducting NRC inspections of the construction activities at the site to determine whether the licensee is complying with the provisions of the construction permit. Prior to involvement with the reactors under construction, I was a Regional Based Reactor Inspector in the Nuclear Support Section for the Operating Reactors Branch. In this capacity, I primarily inspected operating reactors which had experienced mechanical, thermalhydraulic, vibration and corrosion events and assisted in the implementation of selected portions of the basic AEC/NRC inspection program. Before joining the Nuclear Support Group, I was the Principal Inspector for the LaCrosse Boiling Water Reactor and the Palisades Nuclear Generating Station.

Prior to joining the U.S. Atomic Energy Commission, I was the Operations Supervisor for the Ohio State Nuclear Reactor Laboratory and was responsible for the safe operation of this research facility.

In 1962-1963, I was a Licensed Reactor Operator and Instrumentation Machinist responsible for experiment equipment fabrication and installation and reactor operation at the NASA Plum Brook Research Reactor.

From 1958 to 1962, I was associated with the Navy Nuclear Program and was advanced to Chief Machinist's Mate and was a Qualified Chief Machinery Operator. I was responsible for the implementation of safe construction, testing, maintenance and operation of the eight reactor complex of the U.S.S. Enterprise CVA(N)-65 and the AIW dual reactor prototype plant for the U.S.S. Enterprise. I was an instructor and shift crew supervisor.

Prior to being assigned to the Navy Nuclear Program, I had been a First Class Machinist's Mate aboard the U.S.S. Irwin DD-794, a fossil fueled destroyer. I was responsible for the safe operation and maintenance of the main propulsion steam plant.

Prior to joining the U.S. Navy, I was a Machinist Apprentice at the New York Central Railroad and performed maintenance and overhaul on diesel and steam driven locomotives.

WAYNE D. SHAFER

STATEMENT OF PROFESSIONAL QUALIFICATIONS

My name is Wayne D. Shafer. I was born October 11, 1937 at Chicago, Illinois. I am employed by the U. S. Nuclear Regulatory Commission as the Chief, Midland Section, Office of Special Cases.

I graduated from Iowa State University in 1972 with a Bachelor of Science Degree in Mechanical Engineering.

I worked for Argonne National Laboratory at the Experimental Boiling Water Reactor from 1959 to 1967. I was a qualified Senior Operator and Assistant Shift Supervisor.

I worked for Ames Laboratory at the Ames Laboratory Research Reactor from 1967 to 1972. I was a qualified Chief Operator and Shift Supervisor.

I worked for Northern Indiana Public Service Company from 1972 to 1974. I was an Engineer in the Nuclear Engineering Group.

From October 1974 to March, 1982, I was employed by the NRC/AEC as a Reactor Inspector and Inspection Specialist. As a Reactor Inspector I was qualified to inspect Boiling Water Reactors (BWRs) and Pressurized Water Reactors (PWRs), and was a project inspector at four BWR facilities. I was selected as an Inspection Specialist in November 1979. I have participated in five management appraisal inspections, one as a team leader. I served as the Acting Chief, Performance Appraisal Branch, from May 1980 to March 1982.

From March 1982 to July, 1982, I served as the Chief, Management Program Section, Engineering Inspection Branch in Region III. I received my present assignment in July, 1982.