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

February 10, 1983

MEMORANDUM FOR: W. D. Shafer, Chief, Office of Special Cases, Section 2

FROM: R. J. Cook, Senior Resident Inspector, Midland Site

SUBJECT: MONTHLY STATUS REPORT

Attached is the status report for the Midland Nuclear Construction Site covering the period of January 1, 1983, through January 31, 1983.

The status report contains the input from each member of the Midland Inspection Site Team of the Office of Special Cases.

R. J. Cook
Senior Resident Inspector
Midland Site Resident Office

cc/attachments
R. F. Warnick
R. B. Landsman
R. N. Gardner
B. L. Burgess

SUMMARY OF SIGNIFICANT MIDLAND ISSUES

1. Heating, Ventilation and Air Conditioning (HVAC)

Members of Consumers Power Company, Bechtel Power Company, and Zack Company conducted a meeting on January 27, 1983, to finalize comments to resolve the issue of requalification of Zack Company welders and to justify prior welding. Final comments concerning the requalification of welders will be implemented into welding procedures. Requalification of welders is expected after final approval and qualification of welding procedures and the completion of welder retraining.

The NRC RIII has established a hold point prior to restart of welding to review welder requalification procedures and to observe procedure and welder requalification.

2. Electrical

Installed cable reinspection continued with no additional improperly substituted cables found. Currently six substituted cables of approximately 6,000 cables inspected have been identified. Approximately 2,600 cables remain to be reinspected. All cables were installed in Class 1E electrical systems.

The licensee is evaluating the safety significance through the use of a nonconformance report.

3. Remedial Soils Work Authorization

Work continued on underpinning piers 12 East and 12 West. The excavation for the piers is down to the bell area (the base area of both piers), and reinforcing bars are being placed in pier 12 West in preparation to pour pier concrete.

The NRC authorized four point jacking of the feedwater isolation valve pits (FIVPs) in preparation for starting excavation of pier 9. In addition, probing for electrical duct banks around the borated water storage tanks' (BWSTs) foundations was authorized and is a prerequisite for foundation rework.

4. Consumers Power Company Construction Completion Program

On January 10, 1983, Consumers Power Company submitted a letter to the NRC detailing the Construction Completion Plan (CCP) which was initially presented on December 2, 1982. After NRC review of the letter, an onsite meeting was held on January 20, 1983, between NRC inspectors and site management to clarify and answer questions.

A meeting will be held on February 8, 1983, at 9:00 AM for Consumers Power Company to present the CCP to the NRC in more detail. After the formal meeting between Consumers Power Company and the NRC, the public will have the opportunity to ask questions of the NRC.

5. Enforcement Conference

An enforcement conference was held on January 18, 1983, in the NRC Region III office to discuss the results of the diesel generator building inspection. As a result of the discussion, further inspection was performed January 19-21, 1983, to obtain additional information regarding IPINs and closeout inspections.

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

JAN 1 1 1983

MEMORANDUM FOR: James G. Keppler, Regional Administrator

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

SUBJECT: MIDLAND MONTHLY STATUS REPORT

Enclosed is the monthly status report for the Midland Project. The report is for the period of December 1, 1982 through December 31, 1982.

R F Warnick

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

Enclosure: As stated

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

8312140056

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

MIDLAND MONTHLY STATUS REPORT

DECEMBER 1 - DECEMBER 31, 1982

SUMMARY OF SIGNIFICANT MIDLAND ISSUES

1. Heating, Ventilation and Air Conditioning (HVAC)

The licensee, as a result of audits of HVAC work activities, determined that welder certifications and welding procedure qualifications were inadequate. All safety-related welding on HVAC was stopped by the licensee on November 30, 1982, and 151 craft workers were laid off. PNO-III-82-130 was issued.

During this reporting period the licensee has begun developing a new set of welding procedures.

2. Electrical

The licensee continued electrical cable reinspections. Two (2) additional improperly substituted cables have been identified. A total of six (6) substituted cables, of approximately 4000 cables reinspected, have been identified. Approximately 5000 cables remain to be reinspected.

3. Remedial Soils Work Authorization

On December 9, 1982, the NRC authorized the licensee to commence construction work on piers 12 East and 12 West under the Turbine Building. On December 13, 1982, Consumers Power Company began work on the piers. During excavation for pier 12 the licensee ran into concrete fill. The chipping and removal of the concrete has caused the work to proceed slower than the licensee had previously expected.

4. Consumers Power Company Construction Completion Program

On December 2, 1982, Consumers Power Company presented to the Region III staff a plan to establish confidence in the adequacy of safety-related work at the Midland Site. The licensee's initial Construction Completion Program (CCP) required a substantial reduction in most of the safety-related work activities and a subsequent reduction in the workforce involving approximately 1100 people. Implementation of the CCP required removal of construction equipment from the work spaces and building cleanup in preparation for a complete QC inspection of every safety-related system in every area. PNO-III-82-131 was issued.

Region III has prepared a draft report of the October-November team inspection. Escalated enforcement action is being considered. An enforcement conference with the licensee is scheduled for January 18, 1983 in RIII.

A meeting was held on December 7, 1982 with IE, NRR, and ELD to discuss the findings of the RIII October-November team inspection and the licensee's proposed construction completion program. A meeting with the licensee to discuss the CCP is scheduled for February 3, 1983 in Midland. It will be open to public attendance.

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.

Meetings Attended

Date	Represented	Purpose
10/22	Stone & Webster Bechtel	Resolution of Observations and Questions on Construction 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.K. for L.S. ... — Project Manager

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

Stone

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

8212310327

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 freezewall, 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. Freezewall 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. HVAC (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, 1932 & 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 QAP 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

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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) [illegible]-2067.

Very truly yours,

A. Stanley Lucks
Project Manager

Enclosure

ASL:ch

BY214.06

OCT 5 1982

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. Rouen	9/20/82-9/24/82
B. 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 Margentime 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

Date	Represented	Purpose
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

BY214358.06

STONE & WEBSTER ENGINEERING CORPORATION

245 SUMMER STREET, BOSTON, MASSACHUSETTS

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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.

Very truly yours,

A. Stanley Lucks
for Project Manager

Enclosure

ASL:pms

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

Date	Represented	Purpose
9/28/82	Stone & Webster Consumers Power Co. U.S. Nuclear Regulatory Commission	Introduction of USNRC and Assessment Team. Discussion 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 Kilber
Project Engineer

for Ann T. Georgen
Project Manager

STONE & WEBSTER ENGINEERING CORPORATION

245 SUMMER STREET, BOSTON, MASSACHUSETTS

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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
Project Manager

Enclosure

ASL:mmm

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 backpacking maintenance with sand and excelsior on the access shafts' lagging.

Meetings Attended

Date	Represented	Purpose
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 Kilber
Project Engineer

for Project Manager

STONE & WEBSTER ENGINEERING CORPORATION

245 SUMMER STREET, BOSTON, MASSACHUSETTS

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

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

October 18, 1982

J.O.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

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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.

Meetings Attended	Represented	Purpose
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

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:	DATE:	PROJECT MANAGEMENT CONCURRENCE:
[signature]	10/21/82	[signature]

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:	DATE:	PROJECT MANAGEMENT CONCURRENCE:
Barry L. Holsinger (signature) Barry L. Holsinger	October 28,1982	Wayne Kilker for L. S. Locke (signature)

CORRECTIVE ACTION BY:
(IDENTIFY ORGANIZATION TAKING CORRECTIVE ACTION)

INITIATOR CONCURRENCE:	PROJECT MANAGEMENT CONCURRENCE:	DATE:

STONE & WEBSTER ENGINEERING CORPORATION

245 SUMMER STREET, BOSTON, MASSACHUSETTS

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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
INDEPENTENT 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

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3
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and 2
ndent Assessment
uxiliary Building Underpinning

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. Barry	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 date.

Meetings Attended

Date	Represented	Purpose
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

U.S. NUCLEAR REGULATORY COMMISSION
REGION III

CUTGOING TRANSMISSION SERVICE REQUEST

Date 2/10/83 Number of Pages cover + 7

To (Name): A H Snuzik

From: R F Warnick

Description memo to Novak dtd 10/29/82 - Re 1.29 [illegible]

Civil Rights Bldg.		
C/V Covers	X	
Mid-set		
MNB		
Phillips Bldg.		
Silver Springs (Willste Bldg)		
Landow Bldg.		
Region I		
Region II		
Region IV		
Region V		
Resident at		
PNAC		
NTC		
Corportate Office (Identify recipient & fax number		
Other (Designate-include fax number		

FOR WP & D/C USE	
System 6 (WP)	
Rapidfax	✓
3M Ext #727	
3M Ext #728	
FTS	✓
Commercial	F
Time Started	120
Time Completed	
Trans. Time (Actual Minutes)	
Operator	Deb

Rev 1/2/81

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

OCT - 9 1980

MEMORANDUM FOR: T. Novak, Assistant Director for Licensing, Division of Licensing

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

SUBJECT: REGULATORY GUIDE 1.29 EXCEPTIONS

During a routine inspection of Midland the inspectors determined that one of the emergency diesel generator exhaust system hangers was not constructed according to the drawings. The welds attaching the hanger to structural support steel were found to be inadequate. This hanger is massive, is directly over the diesel, and is classified as "non Q". If the welds failed and the hanger dropped on the diesel, it could make the diesel inoperative.

The inspectors informed the licensee that the above condition does not meet the requirements of Regulatory Guide 1.29, Position C.4. Position C.4 states, in part, that the quality assurance requirements of Appendix B should be applied to all those activities affecting the functions of those portions of non-safety systems whose failure could reduce the functioning of any plant safety system. A copy of the Regulatory Guide is enclosed.

The licensee's position was that the FSAR, Appendix 3A, took exception to Regulatory Guide 1.29, Position C.4, and therefore, this hanger does not have to be constructed under Appendix B criteria. A copy of Appendix 3A is enclosed.

Subsequently, the inspectors had discussions with Darl Hood and others of your staff about the exhaust system hangers. The inspectors were informed that not only are the hangers considered to be "Q", but the diesel exhaust piping itself is also considered to be a safety related component.

The licensee's position was that the exhaust piping is a non-safety related component of the emergency system.

~~8312110130~~

Oct 29 1982

Region III agrees with your staff. In addition, we believe the requirements of Regulatory Guide 1.29, Paragraph C.4, should be applicable to Midland and exceptions to this position should be limited rather than plant-wide.

We request clarification of the NRC position. Does NRR accept the FSAR, Appendix A exception to RG 1.29, C.4? Are the emergency diesel generator exhaust system and hanger safety-related?

If you have any questions, please contact either Wayne Shafer or myself.

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

Enclosures: As stated

U.S. NUCLEAR REGULATORY COMMISSION

September 1978

REGULATORY GUIDE

OFFICE OF STANDARDS DEVELOPMENT

REGULATORY GUIDE 1.29

SEISMIC DESIGN CLASSIFICATION

A. INTRODUCTION

General Design Criterion 2, "Design Bases for Protection Against Natural Phenomena," of Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," requires that nuclear power plant structures, systems, and components important to safety be designed to withstand the effects of earthquakes without loss of capability to perform their safety functions.

Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50 establishes quality assurance requirements for the design, construction, and operation of nuclear power plant structures, systems, and components that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. The pertinent requirements of Appendix B apply to all activities affecting the safety-related functions of those structures, systems, and components.

Appendix A, "Seismic and Geologic Siting Criteria for Nuclear Power Plants," to 10 CFR Part 100, "Reactor Site Criteria," requires that all nuclear power plants be designed so that, if the Safe Shutdown Earthquake (SSE) occurs, certain structures, systems, and components remain functional. These plant features are those necessary to ensure (1) the integrity of the reactor coolant pressure boundary, (2) the capability to shut down the reactor and maintain it in a safe shutdown condition, or (3) the capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposures comparable to the guideline exposures of 10 CFR Part 100.

This guide describes a method acceptable to the NRC staff for identifying and classifying those features of light-water-cooled nuclear power plants that should be designed to withstand the effects of the SSE. The Advisory Committee on Reactor Safeguards has been consulted regarding this guide and has concurred in the regulatory position.

B. DISCUSSION

After reviewing a number of applications for construction permits and operating licenses for boiling and pressurized water nuclear power plants, the NRC staff has developed a seismic design classification system for identifying those plant features that should be designed to withstand the effects of the SSE. Those structures, systems, and components that should be designed to remain functional if the SSE occurs have been designated as Seismic Category I.

C. REGULATORY POSITION*

1. The following structures, systems, and components of a nuclear power plant, including their foundations and supports, are designated as Seismic Category I and should be designed to withstand the effects of the SSE and remain functional. The pertinent quality assurance requirements of Appendix B to 10 CFR Part 50 should be applied to all activities affecting the safety related functions of these structures, systems, and components.

a. The reactor coolant pressure boundary.

b. The reactor core and reactor vessel internals.

c. Systems[1] or portions of systems that are required for (1) emergency core cooling, (2) postaccident

*Lines indicate substantive changes from previous issue.

[1]The system boundary includes those portions of the systems required to accomplish the specified safety function and connected piping up to and including the first valve (including a safety or relief valve) that is either normally closed or capable of automatic closure when the safety function is required.

[illegible] of (3) postaccident [illegible] hydrogen removal [illegible]

d. Systems[1] or portions of systems that are required for (1) reactor shutdown, (2) residual heat removal, or (3) cooling the spent fuel storage pool.

e. Those portions of the steam systems of boiling water reactors extending from the outermost containment isolation valve up to but not including the turbine stop valve, and connected piping of 2½ inches or larger nominal pipe size up to and including the first valve that is either normally closed or capable of automatic closure during all modes of normal reactor operation. The turbine stop valve should be designed to withstand the SSE and maintain its integrity.

f. Those portions of the steam and feedwater systems of pressurized water reactors extending from and including the secondary side of steam generators up to and including the outermost containment isolation valves, and connected piping of 2½ inches or larger nominal pipe size up to and including the first valve (including a safety or relief valve) that is either normally closed or capable of automatic closure during all modes of normal reactor operation.

g. Cooling water, component cooling, and auxiliary feedwater systems[1] or portions of these systems, including the intake structures, that are required for (1) emergency core cooling, (2) postaccident containment heat removal, (3) postaccident containment atmosphere cleanup, (4) residual heat removal from the reactor, or (5) cooling the spent fuel storage pool.

h. Cooling water and seal water systems[1] or portions of these systems that are required for functioning of reactor coolant system components important to safety, such as reactor coolant pumps.

i. Systems[1] or portions of systems that are required to supply fuel for emergency equipment.

j. All electric and mechanical devices and circuitry between the process and the input terminals of the actuator systems involved in generating signals that initiate protective action.

k. Systems[1] or portions of systems that are required for (1) monitoring of systems important to safety and (2) actuation of systems important to safety.

l. The spent fuel storage pool structure, including the fuel racks.

m. The reactivity control systems, e.g., control rods, control rod drives and boron injection system.

n. The control room, including its associated equipment and all equipment needed to maintain the control room within safe habitability limits for personnel and safe environmental limits for vital equipment.

o. Primary and secondary reactor containment.

p. Systems,[1] other than radioactive waste management systems,[2] not covered by items 1.a through 1.o above that contain or may contain radioactive material and whose postulated failure would result in conservatively calculated potential offsite doses (using meteorology as recommended in Regulatory Guide 1.3, "Assumptions Used for Evaluating the Potential Radiological Consequences of a Loss of Coolant Accident for Boiling Water Reactors," and Regulatory Guide 1.4, "Assumptions Used for Evaluating the Potential Radiological Consequences of a Loss of Coolant Accident for Pressurized Water Reactors") that are more than 0.5 rem to the whole body or its equivalent to any part of the body.

q. The Class 1E electric systems, including the auxiliary systems for the onsite electric power supplies, that provide the emergency electric power needed for functioning of plant features included in items 1.a through 1.p above.

2. Those portions of structures, systems, or components whose continued function is not required but whose failure could reduce the functioning of any plant feature included in items 1.a through 1.q above to an unacceptable safety level or could result in incapacitating injury to occupants of the control room should be designed and constructed so that the SSE would not cause such failure.[3]

3. Seismic Category I design requirements should extend to the first seismic restraint beyond the defined boundaries. Those portions of structures, systems, or components that form interfaces between Seismic Category I and non Seismic Category I features should be designed to Seismic Category I requirements.

4. The pertinent quality assurance requirements of Appendix B to 10 CFR Part 50 should be applied to all activities affecting the safety-related functions of those portions of structures, systems, and components covered under Regulatory Positions 2 and 3 above.

---

[2]Specific guidance on seismic requirements for radioactive waste management systems is under development.

[3]Wherever practical, structures and equipment whose failure could possibly cause such injuries should be relocated or separated to the extent required to eliminate this possibility.

D. IMPLEMENTATION

The purpose of this section is to provide information to applicants regarding the NRC staff's plans for using this regulatory guide.

This guide reflects current NRC staff practice. Therefore, except in those cases in which the applicant proposes an acceptable alternative method, the method described in this guide will be used in the evaluation of submittals for operating license or construction permit applications until this guide is revised as a result of suggestions from the public or additional staff review.

[illegible] Guide 1.29 - SEISMIC DESIGN CLASSIFICATION (Rev. 3, 9/78)

The seismic design classification for plant structures, systems, and components meets the intent of Regulatory Guide 1.29. In order to meet the intent of the Regulatory Guide, certain clarifications of the guide are necessary. The following items describe those clarifications and specific exceptions to the guide.

a. Position C.1.d - Systems required for reactor shutdown or residual heat removal must be designed for the SSE. This is interpreted to include only those minimum systems which must function in the performance of an orderly shutdown and in maintenance of the plant in the shutdown condition. For the reasons stated in response to Regulatory Guide 1.26, the cooling water to the letdown coolers is not designed to Seismic Category I standards. The chemical addition system located in a tornado protected building is not designed to Seismic Category I requirements since the BWST and EBS can provide sufficient boric acid for reactor shutdown/cooldown after a seismic event. The boric acid in the BWST and EBS is used to complete an orderly feed without bleed shutdown/cooldown of the reactor plant in the event that the letdown system and chemical addition systems are unavailable and the most reactive control rod is stuck out of the core as described in FSAR Subsections 9.2.8 and 9.3.10.

b. Position C.1.h - Since the reactor coolant pumps do not perform any safety function, and since failure of the reactor coolant pumps due to cooling water system failure does not have safety implications (see FSAR Subsection 5.4.1) the cooling water system for the reactor coolant pumps is not designed to withstand an SSE. (Note: The design has been revised for greater conservatism as described following Item c below.)

c. Position C.1.p - This paragraph covers systems, other than radioactive waste management systems, not specifically addressed by the regulatory guide "that contain or may contain radioactive material," and sets a dividing line between Seismic Category I and nonseismic Category I based on an offsite dose resulting from failure of components in the systems. The dividing line value of 0.5 rem, which may be based on the normal annual release limits of 10 CFR 20, conflicts directly with the third paragraph of the introduction to the guide. Such systems are not designed for the SSE unless their failure would result in offsite doses approaching the guideline values of 10 CFR 100.

[illegible] (or temporary [illegible]) [illegible] whose postulated [illegible] [illegible] approaching conditions [illegible] designed to withstand the [illegible] earthquake (SSE).

[illegible] structures, systems, or [illegible] Seismic Category I whose failure could [illegible] the functioning of any [illegible] to an unacceptable level [illegible] [illegible] that such failure will not occur [illegible].

[illegible] quality assurance requirements of [illegible] are not applied to [illegible] [illegible] listed [illegible] above.

[illegible] has been [illegible] and accepted by the NRC. [illegible] is contained in the September 26, 1978, NRC letter to [illegible] Regulatory Guide [illegible] the Mechanical Engineering Branch [illegible] acceptance of this position in 1978, the design [illegible] for [illegible]. Specifically, item b [illegible] to read as follows:

Position C.1.b - The cooling water system for the [illegible] coolant pump (RCP) motor coolers is not [illegible] to withstand an SSE because the RCPs [illegible] perform any safety functions. A control [illegible] low flow alarm for each RCP motor cooler alerts the operator in the control room of a loss of component cooling water (CCW) to an RCP motor. Also, an RCP motor test will be performed to show that the motor can operate without cooling water as described in Subsection 5.[illegible].

RCP [illegible] receive primary cooling from the [illegible] system. Secondary backup [illegible] [illegible] plant, safety related [illegible] seal coolers.

James W Cook
Vice President - Projects, Engineering and Construction

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

December 3, 1982

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

J G Keppler
Administration, Region III
US Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

MIDLAND NUCLEAR COGENERATION PLANT
MIDLAND DOCKET NOS 50-329, 50-330
MIDLAND PLANT INDEPENDENT REVIEW PROGRAM
FILE: B1.1.5 SERIAL: 13750

REFERENCES: (1) J W COOK LETTER TO H R DENTON AND J G KEPPLER, SERIAL 18879 DATED 10/5/82

(2) NRC SUMMARY DATED 11/8/82 OF 10/25/82 MEETING ON INDEPENDENT DESIGN VERIFICATION

Reference (1) provided a description of the Midland Plant Independent Review Program. Reference (2) summarized the October 25, 1982 meeting wherein Consumers Power Company and their contractors, Management Analysis Company (MAC) and Tera, discussed in more detail the Independent Review Program. During this meeting, questions posed by the Staff were responded to by the Company and its contractors.

At the end of the meeting, Consumers Power Company requested the Staff to provide the applicant with policy guidance on the proposed Independent Review Program. The Staff agreed to provide preliminary feedback to Consumers Power Company by October 29, 1982 and to arrange for additional meetings as deemed appropriate. This was subsequently done and an additional meeting was held on November 5, 1982 to provide the NRR Staff more details of the Stone and Webster third party assessment of the implementation of the soils underpin work.

Based upon the meeting of October 25, 1982 and subsequent feedback from the NRC Staff, Consumers Power proposes the following changes to the Independent Review Program as submitted in Reference (1) and discussed at the October 25, 1982 meeting:

(1) The three specific evaluations will not be combined into a single program with coordination of the individual reports by MAC.

(2) The Tera Independent Design Verification (IDV) effort will be completely separate from the MAC effort with neither subcontractor having members from their company involved in the other company's efforts.

(3) The Tera IDV will be on the Auxiliary Feedwater System (AFWS) as originally planned, and will also be implemented on another system which the Staff is to select based on three candidates provided by Consumers Power Company on a risk assessment basis. The three candidate systems proposed by Consumers Power Company are:

   a. Electric Power System (Diesel Generator)
   b. Safeguards Chilled Water System
   c. Containment Isolation System

(4) The Tera IDV will be expanded to include a more in-depth review of construction activities to provide assurance of as-built construction adequacy of the systems included in the Tera (IDV).

(5) For the IDV, any discussions between project personnel and Tera on confirmed findings will take place in formal meetings with the NRC being notified of the meetings in time to attend, if they desire.

(6) For the INPO Construction Project Evaluation, a copy of the final report will be given to the NRC when it is sent to INPO.

We believe that this letter documents the conclusions reached between our organizations regarding the Midland Independent Review.

James W. Cook

JWC/GSK/bjb

CC Atomic Safety and Licensing Appeal Board
CBechhoefer, ASLB
MMCherry, Esq
FPCowan, ASLB
RJCook, Midland Resident Inspector
RSDecker, ASLB
SGadler, Esq
JHarbour, ASLB
GHarstead, Harstead Engineering

File Midland (SB) please attach

Jim Lieberman

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

NOV 24 1982

NOTE TO: Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

FROM: Ronald Hernan, Project Manager
Licensing Branch No. 4
Division of Licensing

SUBJECT: DECEMBER 7, 1982, MEETING WITH REGION III - MIDLAND QA

Per our discussion on November 19, a management meeting has been scheduled with Region III (Keppler, Warnick, Shafer) on December 7, 1982, to discuss implementation of QA and Independent Design Verification programs at the Midland Plant. According to Wayne Shafer (RIII), the agenda will include:

1. Discussion of the commitments in the two Consumers Power Company letters dated September 17, 1982. These letters dealt with QA program implementation.

2. Discussion of the results of Region III's recent "hardware" inspection. These results may indicate a breakdown of QA at Midland.

3. Agree upon the manner of NRC's response to the Consumers Power letters of September 17 and October 5, 1982.

The meeting is scheduled to start at 1:00 pm and will probably be held in Mr. Eisenhut's office.

Ronald W. Hernan, Project Manager
Licensing Branch No. 4
Division of Licensing

cc: H. Denton
D. Eisenhut
R. Johnston
P. Vollmer
J. Scinto
W. Paton
E. Adensam
D. Hood

8312140053

PRESENTATION ON THE CONSTRUCTION PROJECT EVALUATION ON CONSUMERS POWER COMPANY MIDLAND ENERGY CENTER PROJECT UNITS 1 AND 2

Performed by:

MANAGEMENT ANALYSIS COMPANY

March 15, 1983

8410170245

fmac

CONSTRUCTION PROJECT EVALUATION

SPECIFIC AREAS BEING EVALUATED

- ORGANIZATION AND ADMINISTRATION
- DESIGN CONTROL
- CONSTRUCTION CONTROL
- PROJECT SUPPORT
- TRAINING
- QUALITY PROGRAMS
- TEST CONTROL

REQUIREMENTS FOR SUCCESS

- CLEARLY DEFINED TEAM LEADERSHIP
- A SELECT TEAM WITH COMPLIMENTARY CREDENTIALS
- SUFFICIENT TRAINING
- DETAIL PLANNING
- SUFFICIENT PRE-REVIEW OF DOCUMENTATION
- SUPPORT OF UTILITY MANAGEMENT
- PRE-BRIEFING OF CONSTRUCTION/ENGINEERING STAFF AS TO PROGRAM OBJECTIVES AND MANAGEMENT'S SUPPORT
- PERFORMING EVALUATION AND SUMMARIZING RESULTS CONSISTENT WITH INPO FORMAT
- COOPERATION FROM MANAGEMENT IN THE HANDLING OF FINDINGS

TABLE 2

MIDLAND CONSTRUCTION PROJECT EVALUATION TEAM

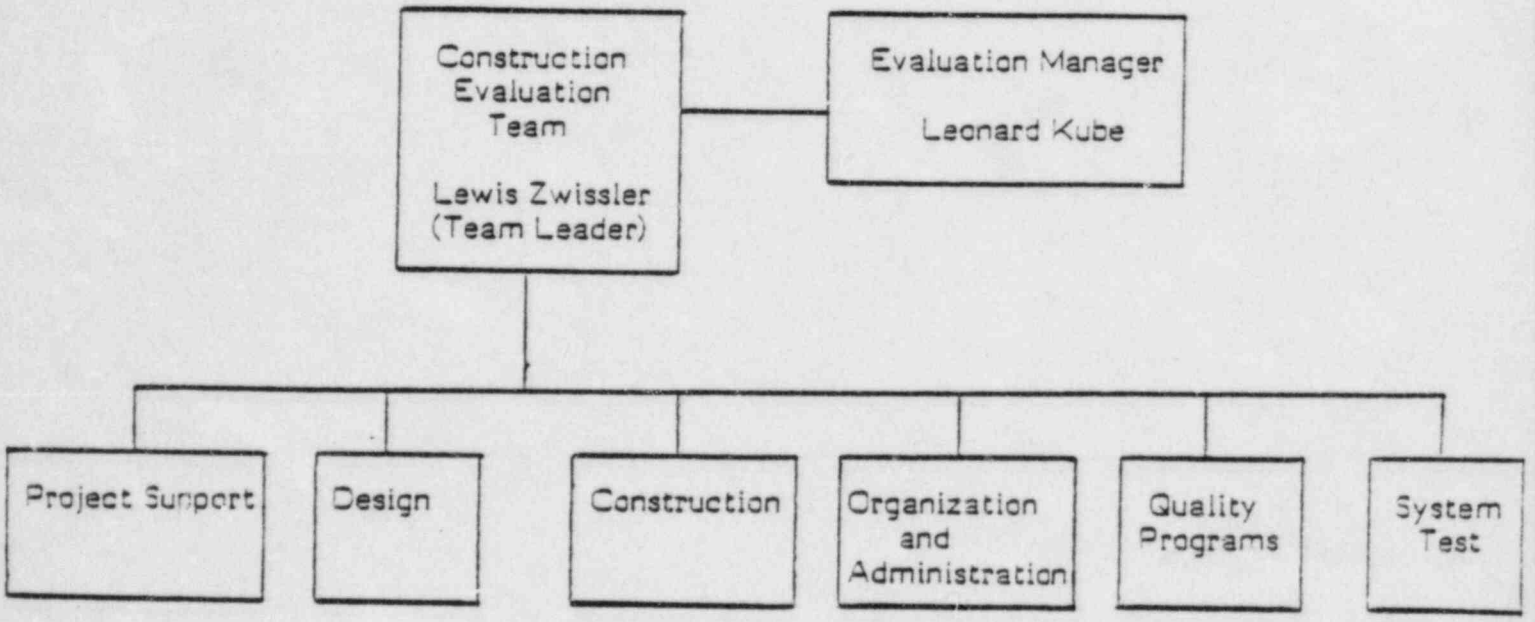
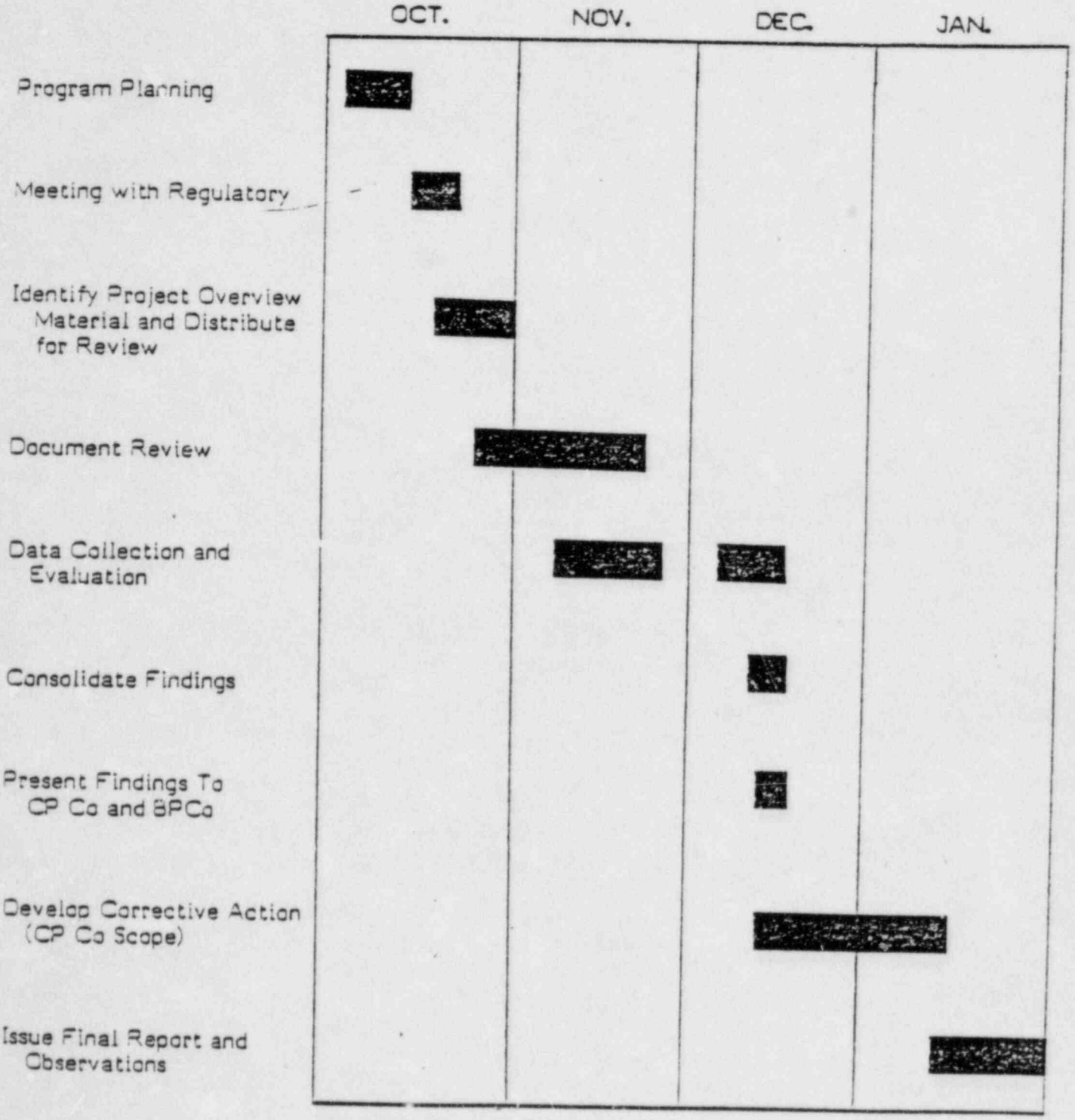
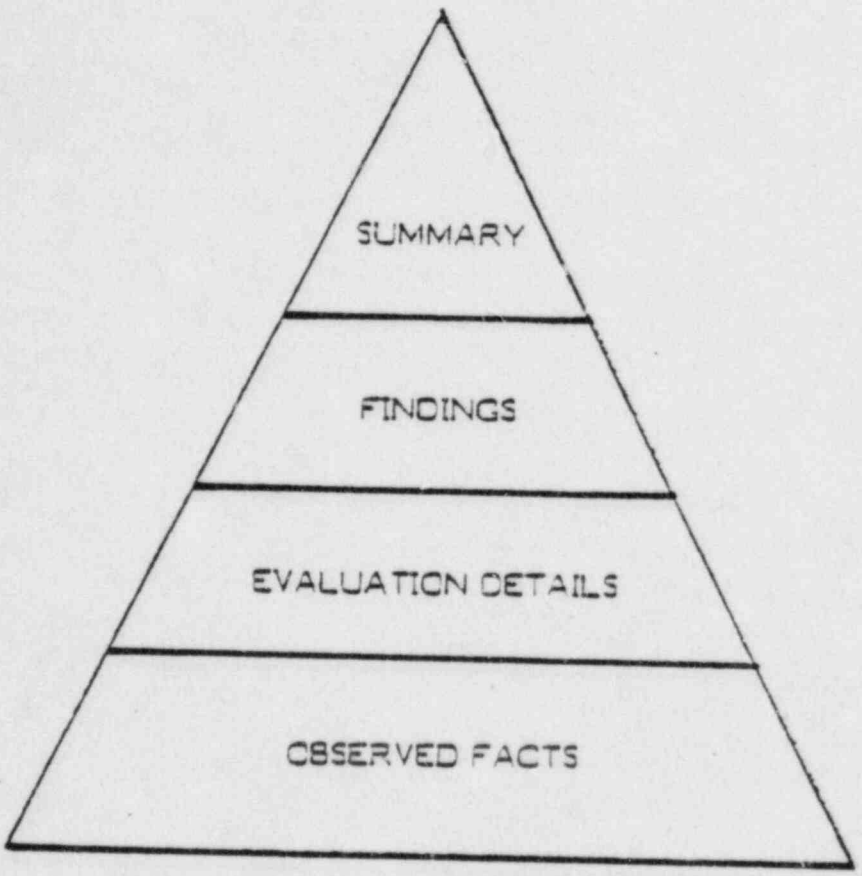


TABLE 3
MIDLAND CONSTRUCTION PROJECT EVALUATION SCHEDULE



EVALUATION METHODOLOGY

- DOCUMENT REVIEW
- PRESENTATIONS (BY PROJECT STAFF)
- PLANT WALK DOWNS
- OBSERVATIONS
- INTERVIEWS
- DETAIL FACT FINDING
- SUMMARIZATION



DEVELOPMENT OF AN EVALUATION

(By Performance Objective)

REPORTING METHODOLOGY

- WEAKNESSES WERE REPORTED IF ANY NON-COMPLIANCE WITH A PERFORMANCE OBJECTIVE WAS IDENTIFIED.
- SOME WEAKNESSES ARE INTER-RELATED DUE TO OVERLAP IN PERFORMANCE OBJECTIVE CRITERIA.
- GOOD PRACTICES WERE REPORTED ONLY IF THEY WERE SIGNIFICANT AND APPLIED SUCCESSFULLY.

TABULATION OF EVALUATION RESULTS

EVALUATION AREA	NUMBER PERFORMANCE OBJECTIVES	NUMBER OF WEAKNESSES	NUMBER OF GOOD PRACTICES
ORGANIZATION AND ADMINISTRATION	3	3	0
DESIGN CONTROL	5	11	5
CONSTRUCTION CONTROL	7	8	2
PROJECT SUPPORT	6	7	3
TRAINING	4	1	4
QUALITY PROGRAMS	4	5	0
TEST CONTROL	6	1	1

THE FOLLOWING ARE THE
FINDINGS IN ABBREVIATED
FORM AND CATEGORIZED INTO
MAJOR ACTIVITY/FUNCTION

NOTE: SEE REPORT FOR EXACT
WORDING OF EACH FINDING AND
ASSOCIATED CORRECTIVE ACTION

fmac

DESIGN METHODOLOGY

FINDING	DESCRIPTION OF GOOD PRACTICE
DC.1-4	DOCUMENTATION OF DESIGN REQUIREMENTS AND INPUTS ON SOME DESIGN ACTIVITIES WAS EXCELLENT
DC.3-2	DOCUMENTATION OF INFORMATION FLOW AND INTERFACE DEFINITION WAS EXCEPTIONAL ON A NUMBER OF DESIGN ACTIVITIES
DC.4-4	MANAGEMENT SPONSORSHIP OF QUALITY IMPROVEMENT PROGRAMS HAS BEEN COMMENDABLE
DC.4-5	RECORDING CALCULATION IDENTIFICATION NUMBER ON 'HELBA' RESTRAINT DRAWINGS IS A GOOD PRACTICE

DESIGN METHODOLOGY

FINDING	DESCRIPTION OF WEAKNESS
DC.1-1	REQUIREMENTS FOR ACCESSIBILITY AND MAINTAINABILITY NOT SPECIFIC
DC.1-2	DIFFICULTY IN IDENTIFYING DESIGN REQUIREMENTS APPLIED IN THE DESIGN PROCESS
DC.1-3	NEED TO IMPROVE FACTORING INDUSTRY EXPERIENCE INTO DESIGN
DC.2-1	MISSING INFORMATION/DATA FLOW AND INTERFACE DESCRIPTIONS FOR DESIGN/REDESIGN EFFORTS
DC.2-2	INTERDISCIPLINE TRANSMITTALS NOT READILY RETRIEVABLE
DC.3-1	LACK OF EMPHASIS DURING DESIGN REVIEWS ON ASSUMPTIONS, METHODS AND MEETING DESIGN CRITERIA
DC.4-1	INSUFFICIENT EMPHASIS ON CONSTRUCTABILITY AND MAINTAINABILITY
DC.4-3	ENGINEERS PERMITTED TO WORK WITH UNCONTROLLED DRAWINGS

DESIGN CHANGE CONTROL

FINDING	DESCRIPTION OF GOOD PRACTICE
DC.5-3	METHOD OF CHECKING FOR INTERFERENCES IN THE DESIGN CHANGE PROCESS IS VERY GOOD

DESIGN CHANGE CONTROL

FINDING	DESCRIPTION OF WEAKNESS
DC.4-2	FIELD CHANGES NOT BEING ADEQUATELY REVIEWED FOR ROOT CAUSES OF THE CHANGE
DC.5-1	INCORPORATION OF REDLINES (A DRAWING CHANGE METHOD) NOT BEING HANDLED IN A CONSISTANT MANNER
DC.5-2	IDENTIFICATION OF OUTSTANDING REDLINES NOT IN THE PROJECT DRAWING STATUS REPORTING SYSTEM
PS.6-1	SOME STICK FILES WERE FOUND OUT-OF-DATE

CONSTRUCTION ACTIVITIES - GENERAL

FINDING	DESCRIPTION OF GOOD PRACTICE
CC.2-2	PRACTICES USED IN EQUIPMENT RIGGING WERE EXCEPTIONAL
CC.7-1	TEST EQUIPMENT FACILITY AND SYSTEM WERE EXCELLENT
PS.1-2	GOOD SAFETY PRACTICES ARE BEING ENFORCED
PS.1-3	INSPECTION OF RIGGING EQUIPMENT WAS EXTENSIVE
PS.1-4	IMPLEMENTING A GOOD EQUIPMENT TAGGING PROGRAM

CONSTRUCTION ACTIVITIES - GENERAL

FINDING	DESCRIPTION OF WEAKNESS
CC.2-1	BULK LAYDOWN AREA WAS NOT ADEQUATE
CC.3-1	MAINTENANCE/INSPECTION PROCEDURES ON INSTALLED EQUIPMENT NOT BEING FOLLOWED
CC.3-2	INSTALLED EQUIPMENT BEING DEGRADED/ DAMAGED
PS.1-1	POTENTIAL FIRE DANGER RESULTING FROM USE OF NON-FIRE RETARDANT WOOD
PS.1-5	AREAS WHERE CONSTRUCTION CONGESTION PREVENTED SAFE REGRESS

CONSTRUCTION WORK INSTRUCTIONS

FINDING	DESCRIPTION OF WEAKNESS
CC.1-2	INSUFFICIENT INPUT INTO DESIGN/CONSTRUCTION PACKAGES RELATED TO INTERFERENCES, INSPECTION AND PROCEDURES
CC.4-1	CRAFT'S WORK INSTRUCTION PACKAGES HAVING INSUFFICIENT OR CONFLICTING INFORMATION
CC.5-1	WORK INSTRUCTION PACKAGES LACKING CLEAR INSPECTION PROCEDURES AND CRITERIA
QP.2-1	LACK OF STANDARDIZATION IN QA/QC INTERPRETATION OF INSPECTION REQUIREMENTS

ORGANIZATION/ADMINISTRATION

FINDING	DESCRIPTION OF GOOD PRACTICE
TN.1-1	MANAGEMENT SUPPORT OF TRAINING PROGRAMS WAS EXCEPTIONAL
TC.3-1	A LARGE AND EXPERIENCED STAFF IS BEING APPLIED IN THE TEST PROGRAM PLAN DEVELOPMENT

ORGANIZATIONAL/ADMINISTRATION

FINDING	DESCRIPTION OF WEAKNESS
OA.1-1	RESPONSIBILITY CHAPTER IN PROJECT MANUAL NEEDS UPDATING
OA.3-1	POSITION DESCRIPTIONS ARE NOT AVAILABLE FOR ALL MANAGEMENT PERSONNEL
CC.1-1	INSUFFICIENT FIELD ENGINEERING SUPPORT
QP.1-2	QA/QC ORGANIZATION CHART NOT UP-TO-DATE
TN.2-1	ORGANIZATIONAL RESPONSIBILITIES FOR QA TRAINING IS FRAGMENTED

QUALITY ACTIVITIES

FINDING	DESCRIPTION OF WEAKNESS
QA.2-1	LACK OF PRODUCTION PERSONNEL INVOLVEMENT IN DISPOSITIONING CORRECTIVE ACTION
QP.4-1	CURRENT METHOD FOR TRACKING CORRECTIVE ACTION WAS NOT EFFECTIVE
QP.4-2	SIGNIFICANT CONDITIONS ADVERSE TO QUALITY ARE NOT ALWAYS VISIBLE IN TREND REPORT

PLANNING AND SCHEDULING

FINDING	DESCRIPTION OF WEAKNESS
CC.5-2	INSPECTION SCHEDULING IS NOT CONSISTENTLY APPLIED
PS.2-1	PLANNING/SCHEDULING PROCEDURES ARE NOT CLEARLY DEFINED
PS.2-2	PLANNING/SCHEDULING PROCESSES ARE NOT INTEGRATED
PS.3-1	CURRENT MILESTONE SCHEDULE CAN NOT BE ACHIEVED
PS.3-2	FLOW OF PROJECT CONTROL INFORMATION IS NOT CLEARLY DEFINED
QP.1-1	PLANNING OF CONSTRUCTION AND INSPECTION ACTIVITIES IS NOT A COMBINED EFFORT
TC.5-1	PREPARATION OF WORKING LEVEL TEST PROCEDURES IS BEHIND SCHEDULE

TRAINING

FINDING	DESCRIPTION OF GOOD PRACTICE
TN.2-2	TRAINING PROGRAM DEVELOPED JOINTLY BY BECHTEL AND CP CO WAS EXCELLENT
TN.3-1	NEW HIRE ORIENTATION AND TRAINING WAS EXCEPTIONAL
TN.4-1	TRAINING FACILITIES, EQUIPMENT AND MATERIAL WERE ABOVE AVERAGE

MAJOR STRENGTHS

- THE SPACE CONTROL PROGRAM FOR INTERFACE CHECKING PRIOR TO RELEASE OF DESIGN CHANGES IS EXCELLENT.
- THE PROGRAM FOR SCHEDULING AND TRACKING TESTING ACTIVITIES IS COMPREHENSIVE AND WELL STAFFED.

MAJOR WEAKNESSES

- CONSIDERABLE EFFORT IS REQUIRED IN IDENTIFYING AND RETRIEVING DESIGN CRITERIA DOCUMENTATION.
- THERE HAS NOT BEEN SUFFICIENT CONSIDERATION GIVEN FOR CONSTRUCTABILITY, MAINTAINABILITY, AND INSPECTABILITY.
- WORK INSTRUCTIONS TO THE FIELD ARE SOMETIMES INCOMPLETE AND CONFLICTING.
- CONSTRUCTION INSPECTION PROCEDURES AND CRITERIA FOR ACCEPTANCE ARE NOT ALWAYS CLEARLY DEFINED.
- INADEQUATE PLANNING COORDINATION OF QA INSPECTIONS WITH CONSTRUCTION ACTIVITIES.
- QA/QC REQUIREMENTS FOR ACCEPTABILITY ARE NOT CLEARLY DEFINED AND DOCUMENTED.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

File -
Midland
Zimmer

DEC 2 1982

MEMORANDUM FOR: James G. Keppler, Regional Administrator
Region III

FROM: Richard C. DeYoung, Director
Office of Inspection and Enforcement

SUBJECT: MIDLAND AND ZIMMER

As a result of the recent EDO direction regarding more in-depth Program Office involvement in significant problems associated with individual licensees, I have designated certain individuals as responsible for representing IE and assuring that IE is appropriately involved in ongoing agency actions associated with the subject facilities. Mr. James Sniezek, Deputy Director, IE, should be kept informed of and involved in all deliberations and actions involving policy issues. For the Division of Reactor Programs, Mr. James Stone, Chief, Construction Program, Section A, IE, should be kept informed and involved in all other deliberations and actions involving the subject facilities. In addition, Messrs. Sniezek and Stone should be on distribution for significant incoming and outgoing correspondence regarding the facilities. Examples of such correspondence are inspection reports, investigation reports, Confirmatory Action Letters, Congressional correspondence, and correspondence with interested parties. They will ensure that requested IE comments on various documents and proposed actions are provided to the Region within the established time frame.

Your cooperation in this matter is appreciated.

Richard C. DeYoung, Director
Office of Inspection and Enforcement

cc: W. J. Dircks, EDO
H. R. Denton, NRR
E. G. Case, NRR
D. G. Eisenhut, NRR
J. M. Taylor, IE
E. L. Jordan, IE
J. A. Axelrad, IE
J. H. Sniezek, IE
J. C. Stone, IE

12/7/82

PRESENTATION TO NRC

CONSTRUCTION COMPLETION PROGRAM (CCP)

AGENDA

INTRODUCTION

EVALUATION CRITERIA

BASIC PROGRAM DESCRIPTION

DETAILED PLAN DISCUSSION

PLAN RESPONSES TO CRITERIA

EVALUATION CRITERIA

EVALUATION CRITERIA

TO REBUILD CONFIDENCE IN BECHTEL "Q" WORK THE PROGRAM MUST:

1. BRING PLANT INSPECTION STATUS UP TO DATE AS SOON AS POSSIBLE.

2. VERIFY THAT QUALITY ISSUES IN PAST WORK HAVE BEEN IDENTIFIED AND ARE BEING TRACKED.

3. PROVIDE AN INSPECTION PROGRAM THAT CLOSELY TRACKS ALL FUTURE CONSTRUCTION.

4. INSURE THAT ANY NEW WORK DOES NOT COVER UP PAST PROBLEMS.

5. INSURE THAT THE PLAN IS FULLY CONTROLLED BY CPCo AND MONITORED BY KNOWLEDGEABLE PERSONNEL.

6. IDENTIFY AND PROVIDE SUFFICIENT RESOURCES TO ACCOMPLISH THE PLAN.

7. BE SPECIFIC ENOUGH FOR A SATISFACTORY MUTUAL UNDERSTANDING AMONG ALL PARTIES.

8. RESOLVE OUTSTANDING QUESTIONS REGARDING QA PROGRAM.

9. GIVE CONSIDERATION TO ORDERLY AND EFFICIENT CONDUCT OF THE PROJECT.

10. PROVIDE FLEXIBILITY FOR PLAN ADJUSTMENT AS REQUIRED BASED ON INITIAL FINDINGS.

CONSTRUCTION COMPLETION PROGRAM (CCP)

THEME OF CCP

IMPROVE PROJECT PERFORMANCE (FORWARD)
AND DETERMINE THE STATUS OF THE PLANT (BACKWARD)

CCP

REDUCE MANUAL MANPOWER ON THE PROJECT TO ACCOMPLISH THE FOLLOWING:

WORK NON-Q SYSTEMS TO COMPLETION AS SOON AS POSSIBLE

PROVIDE STAFFING TO WORK OFF TURNOVER EXCEPTIONS AND SUPPORT TEST ACTIVITIES ON TURNED-OVER SYSTEMS

IMPLEMENT THE BUILDING CONSTRUCTION COMPLETION PROGRAM (SEE NEXT PAGE)

COMPLETE ZACK ACTIVITIES

COMPLETE B&W ACTIVITIES

PERFORM REMEDIAL SOILS WORK

CONTINUE WITH QA REINSPECTION

CABLE

HANGERS

SPECIFIC BUILDING CCP

A. PREPARE THE BUILDING FOR REINSPECTION (COORDINATED WITHDRAWAL)

REMOVE ALL CONSTRUCTION MATERIAL AND CLEAN ALL AREAS OF THE BUILDING.

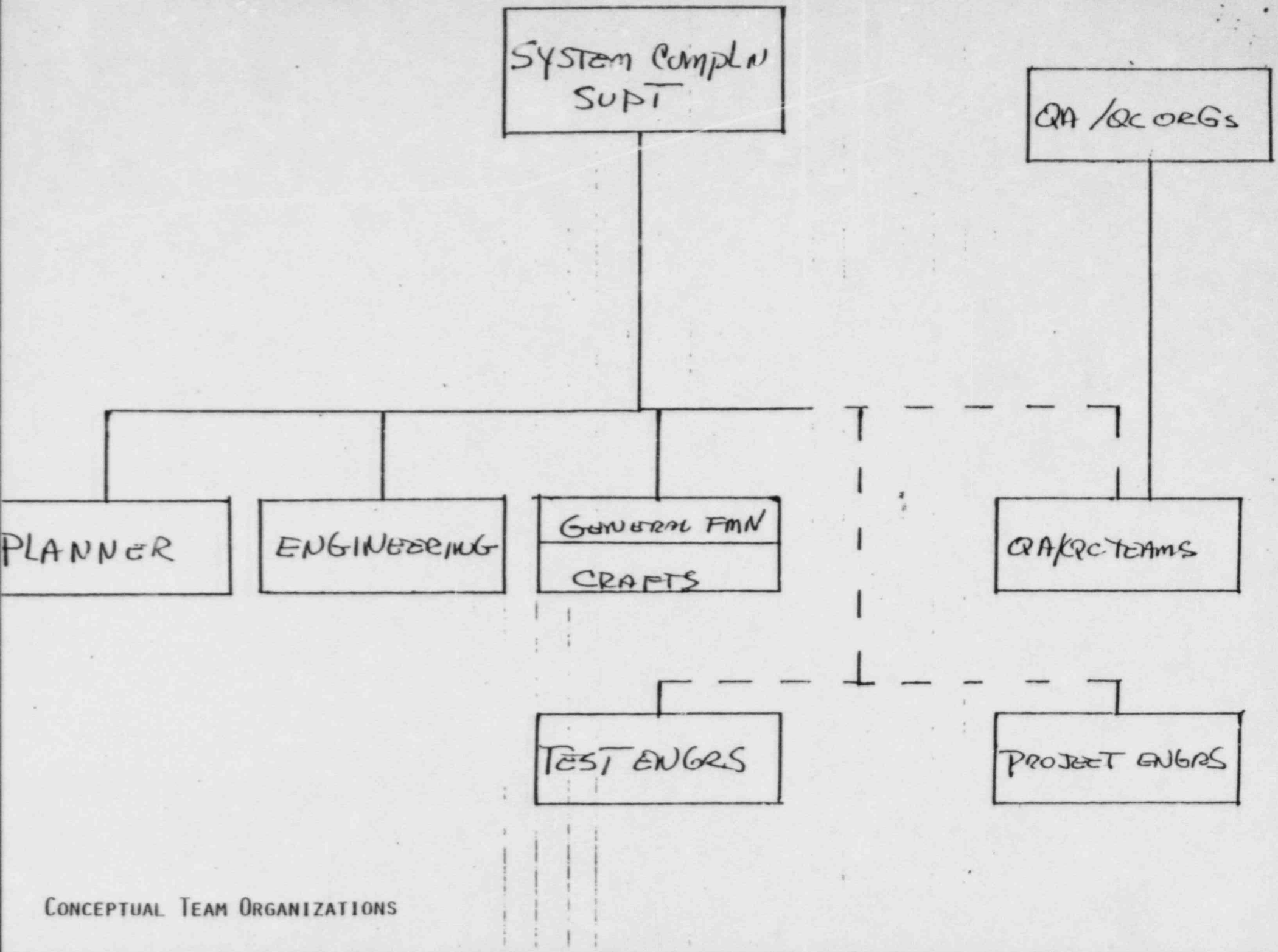
AS WITHDRAWAL IS MADE, PLACE SYSTEMS AND EQUIPMENT IN LAYUP (TEST ENGINEERS TO COORDINATE). COMPLETE CONSTRUCTION NECESSARY TO LAYUP EQUIPMENT.

ALL CONSTRUCTION EQUIPMENT REMOVED TO AN AREA FOR INSPECTION AND SCRAPPING AS NECESSARY.

B. AS AREAS ARE CLEANED, ASSEMBLE SYSTEM TEAMS (SEE NEXT SHEET) AND PERFORM AN INSPECTION OF THE AUXILIARY BUILDING ON A SYSTEM-BY-SYSTEM BASIS. INCLUDE ENGINEERING WALKDOWNS (SEISMIC II/I, PROXIMITY, ETC) AS PRACTICABLE.

C. AFTER A REVIEW OF THE SYSTEM OPEN ITEMS, COMPLETE CONSTRUCTION ON A SYSTEM BASIS AND TURN OVER TO CPCo.

D. AS THE AUXILIARY BUILDING PROGRAM DEVELOPS, MOVE INTO THE DIESEL BUILDING AND THE CONTAINMENTS. SERVICE WATER PUMP STRUCTURE TO BE LAST DUE TO THE NUMBER OF SYSTEMS IN THAT BUILDING THAT HAVE BEEN THROUGH THE TURNOVER PROCESS.



CONCEPTUAL TEAM ORGANIZATIONS

2/7/82

DISTRIBUTION - NRC OPEN ITEMS LIST

R.A.Wells

M.L.Curland (4)

J.K.Meisenheimer

H.P.Leonard

L.E.Davis

J.G.Gilmartin (4)

M.A.Dietrich

E.C.Smith

J.A.Rutgers

J.W.Cook

D.B.Miller (2)

B.H.Peck (6)

P. Corcoran

D. Anderson

HP
1/22/82

The following comments are applicable to Revision 2, dated 11/22/82, of the NRC Open Items List:

1) The list has been updated and reflects activities which took place on Friday, November 19, 1982.

2) A new status column has been added to describe open/closed status with the NRC and the Project.

3) Please contact me if you have any comments/corrections to the list.

BHP
11/22/82

NRC OPEN ITEMS LIST

Revision No. 2

Date 11/22/82

NRC OPEN ITEMS LIST

1. The purpose of this list is to keep track of Construction related open items from NRC Inspections at the Midland Plant.

2. Guide to using the form:

Item Number - each item/issue is numbered sequentially using the following key:

A - Administrative

C - Civil

E - Electrical

M - Mechanical

S - Soils

Date Initiated - enter the date the item/issue is opened with the NRC.

Description - enter a brief description of the item/issue.

NRC Inspector - name of the NRC Inspector

Responsible Engineer - initials of the responsible Site Management Organization (SMO) - Construction Department individual using the following key:

JGB - Balazer, JG (ext. 511)

EME - Evans, EM (ext. 417)

DDJ - Johnson, DD (ext. 422)

GBJ - Johnson, GB (ext. 468)

JSK - Kreple, JS (ext. 405)

GMM - Murray, GM (ext. 508)

BHP - Peck, BH (ext. 400)

DWP - Puhalla, DW (ext. 408)

GWR - Rowe, GW (ext. 414)

DES - Sibbald, DE (ext. 418)

TAS - Spelman, TA (ext. 415)

DJV - Vokal, DJ (ext. 404)

RMW - Wheeler, RM (ext. 416)

RHW - Wieland, RH (ext. 408)

JTW - Walton, JT (ext. 417)

Action - briefly describe action planned or being taken.

Due Date - enter a response/item closeout date, where applicable.

NRC Status - enter the status of the item as far as the NRC is concerned.

OPEN - The NRC is awaiting action or information from us.

CLOSED - No other action is required.

Project Status - enter the status of the item as far as we are concerned.

OPEN - We owe the NRC some action or information, or we have a document needing closure (FCR, NCR, etc.)

CLOSED - No other action is required.

BHPeck
11/22/82

ITEM #	DATE INITIATED	DESCRIPTION	NRC INSP.	RESP. ENG.	ACTION	DUE DATE	NRC STATUS	PROJECT STATUS
A-1	10/19/82	Questions on the IPIN's Program.	Gardner	BHP	NRC has agreed to our future resolution to this problem. We still need to address how to correct work done to date. M. Curland is pursuing.			Open - Need address past IPIN's.

ITEM #	DATE INITIATED	DESCRIPTION	NRC INSP.	RESP. ENG.	ACTION	DUE DATE	NRC STATUS	PROJECT STATUS
C-1	10/22/82	Monorail over Diesel Generator (Dwg. C-1009 welds not per drawing.	Landsman	JSK	The status of this item is being tracked under M-19B.	-		Closed
C-2	10/22/82	Structural Steel - vendor welds.	Landsman	DDJ	This item was originally found by us - not NRC. Issue will remain open until closed out per schedule prep. and by Bechtel.	1/83		Open - Need t close out SCH
C-23	11/10/82	Hole in concrete filled block wall at elevation 645', west side, into degassifier room. Hole was for shielding HVAC duct.	Bruce Burgess	TAS	The following information transmitted to B. Burgess on 11/10/82. A) Spec. 7220-C-231Q Rev 22. See 9.2.3 A&B. B) Dwg. 7220 C-1194Q Rev 2.	-		Closed

IEM #	DATE INITIATED	DESCRIPTION	NRC INSP.	RESP. ENG.	ACTION	DUE DATE	NRC STATUS	PROJECT STATUS
3 v. 2	10/22/82	FSK procedure requires reference to design drawing. FSK-CY-1035 does not comply. Also, NRC wants design dwg. to reference assoc. FSK's.	Landsman	DWP	-Issued NCR-M-01-9-2-155 -Eng. Eval. need for FSK/design dwg. cross reference. -FE Review FSK is for similar problems.			OPEN - Need t expand scope
4 v. 1	10/22/82	The design drawing C-1004 does not show detail for beam connections.	Landsman	DWP	For beam connectors dwg. C-147 allows field to detail-dwg. C-147 provides criteria for welds not shown on C-1004. No other action required. Contact Steve Harvey.			Closed
5	10/22/82	FSK should designate if "Q".	Landsman	DWP	NCR-M-01-9-2-155 issued. FE to review FSK's for similar problems.			Open - Need t expand scope.
6	10/22/82	(Superceded by C-4)						See C-4
7	10/22/82	D/G Bldg. - span change for fan support not per drawing.	Landsman	DWP	Span is o.k. Inspector misread drawing. No other action required. Contact Steve Harvey.			Closed
8	10/22/82	Size of knife blade not specified.	Landsman	DWP	-Detail for bracing to be clarified (FCRC-5174) copy to NRC 11/22/82 -NCR-M-01-9-2-155 issued. -Field to review control of detailing.			Closed

ITEM #	DATE INITIATED	DESCRIPTION	NRC INSP.	RESP. ENG.	ACTION	DUE DATE	NRC STATUS	PROJECT STATUS
9	10/22/82	Duplicate QCIR's for dry pack - same as IPIN problem.	Landsman	DWP	Were not duplicates but were revisions. No other action required.			Closed
10	10/22/82	Lost FCR for a fan support.	Landsman	DWP	Duplicate FCR reretired. Original could not be found. No other action required. Contact J. Davis.			Open - Conduc Audit (MPQAD)
11	10/22/82	Retired FCR - should be annotated on current drawing.	Landsman	DWP	Procedure changed to require retired FCR/ FCN annotation.			Open - Revie Retrofitting
12	11/5/82	The A-572 beams used in Reactor Bldg. - How does QC verify they are in fact A-572 beams?	Landsman	DWP	Review QCIR for attribute. Contact Steve Harvey/Ed Dutton.	11/8		Closed
13	11/5/82	Prior to 1979 what was the material control to keep Q and non-Q steel segregated?	Landsman	DWP	NRC given copies of all old procedures prior to 1979.	11/8		Open - Write up on other sites.
14	11/5/82	Detail 3 on dwg. C-1004 shows ¼" angle and 5/16" plate - field measurements indicate small plates.	Landsman	DWP	-NCR written on plates -FE to rework undersized plates.	11/8		Open - Need Chronology for FCN and Engineering disposition smaller plat
15	11/5/82	Provide NRC with QCIR for structural steel for still framing for second floor of D/G Bldg. - Also any CMTR's for framing steel.	Landsman	DWP	Information available for NRC Review.	11/8		Open - Perfo Inspection (MPQAD)

ITEM #	DATE INITIATED	DESCRIPTION	NRC INSP.	RESP. ENG.	ACTION	DUE DATE	NRC STATUS	PROJECT STATUS
-16	11/10/82	FSK procedure does not allow field to do design. Because connections are designed by Field, the procedure is violated.	Landsman	DWP	FCR initiated to clarify detailing vs. design. Gave FCR to the NRC on 11/22/82.			Closed
-17	11/10/82	Material in laydown area does not seem to be segregated or marked per Field Procedure.	Landsman	DWP	Several trips to laydown area with NRC with no open items identified.			Closed
-18	11/10/82	Do the ¼" plates and L's on fan support meet tolerances for ASTM A-6?	Landsman	DWP	Plates meet ASTM-A-6 L's not to be checked per NRC			Closed - Reviewed FER
-19	11/10/82	Some connection in HVAC fan support was bolted while dwg. called for welded.	Landsman	DWP	NCR written to cover Bay 3.			Open - Develo dwg./QC sign sequence.
-20	11/10/82	Address why QCIR for fan support steel is closed yet as-built is not per drawing.	Landsman	DWP	QAR written to address concern.			Open -What should QCIR address.
-21	11/10/82	Revision 6 of dwg. C-1004 incorporated FCN-C-335 yet the revision block did not note this.	Landsman	DWP	Correct drawing revision block. Contact D. Anderson/ RLAkers			Closed
-22	10/28/82	Chipping of concrete on CB #1 exterior well at el. 680'.	Barrett	BME	Refer to NCR M-1-9-2-154. Additional information provided to Mr. Barrett on 11/18/82.			Open - Need close out NC Corrective action shoul address gene concerns.

ITEM #	DATE INITIATED	DESCRIPTION	NRC INSP.	RESP. ENG.	ACTION	DUE DATE	NRC STATUS	PROJECT STATUS
E-1	10/14/82	Generator Control Panel 1C-231 anchor bolts not not installed according to vendor drawing.	Gardner	GWR	FCR M-6655 written on 9/21/82 (lost) re-written on 10/14/82 requesting alternate anchoring detail.	11/26		Open- need close out of FCR.
E-2	10/14/82	Internal wiring separation is inadequate-Panel 1C-232. (RET-Delta is supplier of 231 and 232 panels to Delaval)	Gardner	GWR	This problem identified on CPCo NCR-075 in June 1981. RTE-Delta on site 11/16/82. Barriers & boxes to be added via DCP. There still are open items that RTE has not addressed relative to this NCR.	11/30		Open- need close out N (MPQAD)
E-3	10/14/82	Foundation bolts for Panel 1C-111 have no traceability	Gardner	GWR	Traceability found and shown to Mr. Gardner.	10/22		Closed
E-3b	10/14/82	Anchor bolt washers missing and cannot verify Bevel washers are there.	Gardner	GWR	Insufficient flat washers on site to complete work. FMR-EY9382 to Procurement 11/11/82 ETA 11/22/82. FCR M-7026 written 11/10/82 to request option of using Bevel washers or not. FCR due 11/22/82 for disposition.	11/30		Open- need close out F

EM #	DATE INITIATED	DESCRIPTION	NRC INSP.	RESP. ENG.	ACTION	DUE DATE	NRC STATUS	PROJECT STATUS
-4	10/14/82	Defective shop terminations in Panel 1C-111.	Gardner	GWR	DeLaval Rep to be requested to make site visit to assess defective terminations. SCRE #64 response due 11/22/82.	11/30		Open-Need to close out SCI
-5	10/14/82	General concern on channel separation of wiring throughout the plant.	Gardner	GWR	QAR F-191 written on 8/2/82, response was to revise E-47 & E-42 and modify PQCI E 3.0. Resident Engineering to issue clarification DCN by 11/24/82 which supplies all criteria for inspection. Field Engineering to prepare FIE 4.200 to give inspection criteria by 12/15/82.	12/15		Open- Need to revise documents.
-6	10/27/82	Mr. Barrett found cable traveling across the tray barrier and then back.	Barrett	GWR	Background information is contained on 11/1 and 11/10/82 updates. FPE 4.000 is being revised - due 11/22/82. FPE will give tie down requirements for horizontal trays, criteria for fill above barrier and will be a retrofit. Appropriate PQCI's will be revised upon issuance of FPE 4.000. Preliminary copy of FPE 4.000 sent to Mr. Barrett on 11/19/82.	11/30		Open- Need procedural revisions.

ITEM #	DATE INITIATED	DESCRIPTION	NRC INSP.	RESP. ENG.	ACTION	DUE DATE	NRC STATUS	PROJECT STATUS
E-7	10/19/82	Dimensions on Drawing E-796 do not agree with as-built conditions.	Gardner	GWR	FCN's 7040 and 8536 DCN #16 to E-796 written and approved. Copies given to R. Gardner on 11/10/82.	11/18		Closed
E-8	10/19/82	Pull boxes for conduits 2BN004 and 2BN007 in Bay 4 of the D/G Bldg. appear to be undersized according to E-42 SH 42.	Gardner	GWR	Background information is contained on update of 11/10/82. FCR E-3157 was approved on 11/17/82 and a copy sent to Mr. Gardner on 11/19/82.	11/19		Closed
E-9	11/2/82	Traceability of base plate material.	Gardner	GWR	According to E-42 SH 100 misc. steel is purchased to C-233Q. C-233Q is a fabrication specification. Bulk material is purchased to G-33Q and approval to purchase bulk materials against G-33Q is granted in C-233Q.	11/18		Open- Bechte to review closure of C-233, App.
E-10	11/2/82	Mr. Gardner requested approved methods of tray attachments to supports.	Gardner	GWR	Gave Mr. Gardner copy of Husky-Burridy hold down clip detail, specification for hold-down criteria (E-42 sh 8A, Sh 64 & Sh 64A). Welding details being numerous are specified in E-42. Gave Mr. Gardner SHDC-A hold down clip, copy of non Q & Q P.O.'s	11/5		Closed

ITEM #	DATE INITIATED	DESCRIPTION	NRC INSP.	RESP. ENG.	ACTION	DUE DATE	NRC STATUS	PROJECT STATUS
1-1	10/14/82	Exhaust system hangers in Diesel Generator Building. Why is this hanger non-Q.	Landsman	JSK Corcoran Lewis Ballweg	Hanger drawings have been revised Q. MPQAD has written an NCR (#M01-5-2-166)			Closed
1-2	10/19/82	Strut Support not welded according to drawing 652-1-510.	Landsman	JSK Marl	Hanger Construction not complete.			Closed
1-3	10/19/82	Strut support not welded according to dwg. 652-1-510	Landsman	JSK Marl	Hanger Construction not complete.			Closed
1-4	10/19/82	Item #1 Bill of Material not according dwg. "10x8" tube steel replaced by "10 x10" and not called out on work print 652-1-510.	Landsman	JSK Marl	Hanger Dwg. redlined in Standish Fab Shop due to lack of material. Redline not included in work print.			Closed
1-5	10/19/82	No preheat done to structural steel in Diesel Generator Building prior to welding of exhaust system hangers. H 652 sh 1.	Landsman	JSK Sprague Fredianelli Harrison	PQC1 CW 1.00 does not require verification for preheat less than 70°F. NRC position is that verification of all temperatures should be required. BPCo has written FCR C 5150 to have welding spec changed to reflect pre qualified AWS spec 1976. Telecon to Paul Barrett 11/18/82 to discuss following PQCI s: P-2.10, PW-1.00, E-2.1 E-1.0, FPW-4.000, CW-1.00, W-1.60.			Closed
1-6	10/19/82	Field Welding Engineer does not keep records of non-Q inspections or what to impact.	Landsman	JSK	NRC observation that non-Q field welding records are not readily accessible.			Closed

IM #	DATE INITIATED	DESCRIPTION	NRC INSP.	RESP. ENG.	ACTION	DUE DATE	NRC STATUS	PROJECT STATUS
1-7	10/20/82	Questions concerning large bore hangers in D/G Bldg. 1. Where is weld rod type specified for stiffener plate welding symbol.	Landsman	JSK	Form 84 civil as called out in weld spec. G-27.			Closed
1-8	10/20/82	2. Diesel Exhaust snubber 1-652-1-19. No stanchion to plate welding symbol.	Landsman	JSK	Assembly furnished by ITT Grinnell, no welding required at point in question.			Closed
1-9	10/20/82	3. Upper Hangers on Diesel Exhaust system. Have they been inspected by QC.	Landsman	JSK Marl	P129 forms have not yet been filled out by FE's. Hangers not released to QC.			Closed
1-10	10/20/82	4. Stiffener Plates Welded to Structural above hanger in question welded on one side only, is this good Eng'g practice?	Landsman	JSK Corcoran	Technically acceptable obstruction would not allow welding to both sides.			Closed
1-11	10/20/82	Questions concerning large bore hangers in Diesel Generator Bldg. Is there a redline for snubber 1-652-1-19 showing weld to imbed in bay 2. Similar situation in Bay 1.	Landsman	JSK Marl	FCR 6925 written to cover installation.	11/4		Closed
1-12	10/20/82	Bay 2 left side beam attachment for spring hanger, although weld-there is a gap between two welded pieces is this acceptable redline to 1-652-1-501.	Landsman	JSK Sprague	Weld is okay, at least 7/16".	11/4		Closed

IM #	DATE INITIATED	DESCRIPTION	NRC INSP.	RESP. ENG.	ACTION	DUE DATE	NRC STATUS	PROJECT STATUS
-13	10/19/82	Number on hanger FSK is not the same as number on ISO that references detail no. (1-652-1-19) US. 2-652-1-19.	Landsman	JSK Marl	M652 Sh 1 Rev. 9 Fl corrected problem.	11/4		Closed
-14	10/19/82	Procedure for the time limit on forwarding SPEC changes from Ann Arbor.	Landsman	JSK JDavis Gilmartin	BPCo internal memo directing FE that two days will be allowed for tech. review prior to distribution.	11/4		Closed
-15	10/19/82	Painting requirements for welds. Painting inside cont. is Q. Painting outside is non-Q. Is painting of Q welds required to maintain the integrity of the weld.	Barrett	JSK Riat Corcoran	BPCo has determined that based on metallurgical review of the problem that painting is not required to maintain integrity of the weld. (Need to confirm this with Barrett).	11/9		Closed
-16	10/28/82	Control of distribution of redline changes should go through Document Control not Field Engineering as is presently done.	Barrett	JSK Gilmartin JDavis	BPCo has developed flow charts of the existing and proposed methods of handling drawing changes to route through D/C. Copy of flow charts forwarded to NRC.	11/22		Open
-17	10/28/82	Is there a program to control removal of temporary hangers?	Barrett Cook	JSK Pulito	BPCo presently has several methods of controlling temporary. They include: 1. System Punchlist 2. System Walkdown 3. Hanger Walkdown 4. PSDIV Section 5.8.1 This program will be explained to RCook NRC.	11/15		Closed

ITEM #	DATE INITIATED	DESCRIPTION	NRC INSP.	RESP. ENG.	ACTION	DUE DATE	NRC STATUS	PROJECT STATUS
1-18	10/28/82	Material traceability problem. Material purchased from non-approved vendor. (NCR3266)	Barrett	JSK Corcoran Marl McClure Anderson Detrich	Telecon to Barrett 11-18-82 did not resolve concern. Additional information is being gathered by DAnderson.			Open
1-19 A	10/22/82	Monorail over diesel generator. Why is this Non-Q?	Landsman	JSK Corcoran Anderson Senn	MPQAD has written a QAR (#F228). Calculations to show siesmic analysis has been performed have been reviewed by NRC. 2 over 1 generic issue.			Open
1-19 B	10/22/82	Monorail over diesel generator. Welds do not conform with what's on dwg. C-1009 (This item was C-1).	Landsman	JSK Corcoran Anderson Senn	Welds conform with symbols on dwg. however, interpretation of weld symbols pertaining to the extent of weld must be clarified for the NRC.			Open
1-20 A	11/10/82	The diesel engineer exhaust silencer is designed to move horizontally on 2,1/8" stainless bearing plates. 4,1/16 bearing plates have been installed.	Burgess	JSK Kilizzek Marl	Vendor dwgs. M-18-357-1 and M-18-358-2 shows flourocarbon bearing plate detail.			Closed
1-20 B	11/10/82	Will dirt between the plates hinder the movement.	Burgess	JSK	5 of 16 flourogold bearing plates are sufficently warped to allow inclusion of dirt. Top flourogold plate is larger than the bottom to preclude the inclusion of dirt. BPCo will develop a program to blow out before T/O. (continued)			Closed

ITEM #	DATE INITIATED	DESCRIPTION	NRC INSP.	RESP. ENG.	ACTION	DUE DATE	NRC STATUS	PROJECT STATUS
1-20 B (continued)					Vendor brochure FC-5015-3 states that plates should be protected from contamination.			
1-21 A	11/10/82	Support bearing plates in Bay 1 are not large enough to be welded to exhaust silencer support. Dwg 7220-M18-250-5 calls for bearing plates to be welded.	Burgess	JSK Kiliszek Marl	FCR 7047 written to cover stitch welds. All plates are welded per dwg.			Open
1-21 B	11/10/82	Why are there slots in the center support on the silencer in Bay 4.	Burgess	JSK Kiliszek Marl	Dwg. M-18-425-4 shows detail and notes to enlarge center holes in field to clear anchor bolts where necessary.			Open
1-22 A	11/10/82	Exhaust silencer has calculated horizontal growth of .532" per dwg. M-18-250-5. The slots in the bearing supports are not uniform in all bays and may not allow predicted thermal expansion.	Burgess	JSK Kiliszek Marl	NCR 4693 has been written to rework plates. Slots were torch cut and not machined to dimensions shown on dwg.			Open
1-22 B	11/10/82	Why didn't the QC receipt inspection program catch the slot problem.	Burgess	JSK Kiliszek Marl	Receipt Inspection Program was not required to inspect to that detail.			Open
1-23 A	11/10/82	Center support beneath exhaust silencer in Bay 1 is not grouted completely and may put additional load on exhaust pipes.	Burgess	JSK Kiliszek Marl Anderson	Silencer was installed prior to exhaust pipes. Pipes were then fitted to silencer from engine.			Open

IM #	DATE INITIATED	DESCRIPTION	NRC INSP.	RESP. ENG.	ACTION	DUE DATE	NRC STATUS	PROJECT STATUS
M-23 B	11/10/82	What does the lack of grout in center support do to harm the outside flourocarbon bearing support plates. How much weight can they stand.	Burgess	JSK Kiliszek Marl	Calculations done by BPCo field eng'g show load to be about 31 PSI. Brochure for flourogold bearing plates show that they can withstand 500PSIat 400°F.			Closed
M-23 C	11/10/82	Vendor dwg M-18-250-6 show jacking plates to be in - bedded in concrete beneath support jacking screws. What effect does jacking screws have on bare concrete. Show calculations to prove concrete strength was adequate to support jacking with out failure.	Burgess	JSK Kiliszek Marl	NCR 4694 has been written against installation of jacking plates. Not all plates are missing. D. Anderson is doing concrete calcs.			Open
M-24	11/10/82	Center silencer support drawing M-8-250-5 shows that anchor bolts have one nut while there are actually two units installed in field.	Burgess	JSK Kiliszek Marl	Extra nuts have been removed.			Closed
M-25	11/10/82	M-18-250-5 notes that support plate set screws should be removed after grouting and they have not been.	Burgess	JSK Kiliszek Marl	Set screws have been removed.			Closed
M-26	11/10/82	Starting air lines in Bay 2. What year of the ASME code are these lines constructed to? What year of the ASME code are these lines examined to?	Barret	JSK DAnderson	Starting air lines were supplied by Grinnell. Table 3. 2.4 of the FSAR states that "shop fabricated piping 2½" and larger is designed to the 1981 ASME code summer '73 addendum. (continued)			Closed

LM #	DATE INITIATED	DESCRIPTION	NRC INSP.	RESP. ENG.	ACTION	DUE DATE	NRC STATUS	PROJECT STATUS
-26 continued)					Table 3.2-3 of the FSAR states that the Emergency Diesel generators (supplied by Delaval are designed 1974 ASME code, summer '76 addendum. The 1981 code states that section III piping 4" and less does not require NDE more stringent than visual. The 1974 code changes the size to 2" and less. QAR F-222 has been written by MPQAD.			

ITEM #	DATE INITIATED	DESCRIPTION	NRC INSP.	RESP. ENG.	ACTION	DUE DATE	NRC STATUS	PROJECT STATUS
S-1	8/9/82	Develop Procedure For Construction Coordination Forms.	Gardner	GMM	Ready to close. Resolve with Gardners next visit.	11/5		Closed
S-2	7/15/82	Provide NRC with our procedures to drill with Revert.	Gardner	DES	SWP Procedure issued-More-trench procedure needs revision.	11/11		Open
S-3	9/22/82 Item of Noncompliance.	BWST Crack Grouting	Landsman	DWP	Review MPQAD			Closed - Sent response to N
S-4	9/22/82 Item of Noncompliance.	Slope layback	Landsman	GMM	Review MPQAD response			Closed - Sent response to N
S-5	9/22/82 Item of Noncompliance.	Petcock location	Landsman	DES	Review MPQAD response			Closed - Sent response to N
S-6	9/24/82	Why is EPA moving up? Resolve question with R. Landsman.	Landsman	GMM	Prepare response by 11/1/82.	11/5		Open
S-7	10/22/82	Temporary underpinning beneath T.B. "Q". Define on C-45.	Landsman	DES	Addressed w/NRC on 11/4/82. Work to be board order plus MPQAI 1 & 2.	11/11		Open
S-8	10/22/82	Baffle & Perimeter Dike Q?	Landsman	RHW	Same as S-7	11/11		Open

M #	DATE INITIATED	DESCRIPTION	NRC INSP.	RESP. ENG.	ACTION	DUE DATE	NRC STATUS	PROJECT STATUS
;-9	10/22/82	Letter to NRC on C-45 review for "Q".	Landsman	RHW	Mooney to send letter-need follow up.	11/5		Open

UPDATE-11/22/8

4500 W. 12TH PLACE • CHICAGO (CICERO) ILL 60650 • 312/242-3434
4401 WESTERN • FLINT MICHIGAN 48506 • 313/736-2040

the ZACK co.

CUSTOM METAL FABRICATION

November 30, 1982 #7220-M-151-Zs-754

Bechtel Power Corporation
P.O. Box 2167
Midland, Mi. 48640

CONSUMERS POWER COMPANY
RECEIVED
DEC 01 1982
MPQAD-HVAC QA

Attn: Mr. L.E. Davis, Site Manager

Subject: Safety Related Welding

Gentlemen:

During the past few weeks an extensive effort has been expended by the Bechtel Corporation, Consumers Power Co. and the Zack Company to evaluate the Photon Audit Findings and determine its impact on the Midland Project HVAC installation. As a result of these efforts and the discussions held November 29, 1982 (see minutes attached) the following actions have been initiated by the Zack Co.

- Effective 3:00 a.m., Tuesday November 30, 1982

  1. The Zack Co. has discontinued all safety related welding.
  2. The Zack Co. has discontinued the Qualification of new welders.
  3. The Zack Co. has withdrawn all safety-related weld procedures.

- Effective Tuesday, November 30, 1982 a total of 151 craft were laid off from 1st and 2nd shift.

- A recovery plan has been initiated and will be presented to Bechtel by December 10, 1982 (see attached outline).

The above actions were taken by the Zack Company in conjunction with MPQAD and Bechtel Corporation to continue to promote the need for unquestionable quality on the Midland Project above existing commitments to project schedules and completion objectives.

The Zack Company will work with Bechtel Corporation to redevelop and reestablish a project schedule based upon successful resolution of the welding problems.

Should you have any problems or questions concerning the above please do not hesitate to contact the undersigned.

Very truly yours,

David E. Calkins
Project Manager

DEC/ps

cc: C.Z. DeZutel
D.R. Malzahn
E.J. Riley
R.B. McCarley
D.W. Graf
J.G. Balazer
Files - Midland
Files - Chicago
MPQAD - H. Leonard

MEETING MINUTES

SUBJECT: MIDLAND ENERGY CENTER - HVAC SUBCONTRACT 7220-M151, AUDIT OF PHOTON TESTING, INC.

The purpose of this letter is to document the agreements reached in the Bechtel, Zack, CPCo meetings held on November 29, 1982 regarding the subject audit.

MPQAD conducted an audit of Photon Testing, Inc. during the period September 14 through September 16, 1982. Audit report M01-336-2 was issued October 14, 1982. The audit report included 11 findings and 2 observations. As a result of a Bechtel, Zack, CPCo meeting held on November 3, 1982, it was agreed that MPQAD would review the audit report to assure the issues are properly defined. This was to be completed November 19, 1982. It was also agreed that welder certifications would continue to be acceptable until this review provided objective evidence to the contrary. A further conclusion at that time was that the audit results might be caused for challenging the qualification of Zack welding procedures, and that, again, based on the results of the MPQAD review, it may be necessary to reverify the procedures.

The MPQAD review of the audit results was completed November 19, 1982. Subsequently, several Bechtel, Zack and CPCo meetings have occurred to analyze the results. The following conclusions have been reached:

1) Although needing to be restated for clarity, the original audit findings are to remain. The audit concluded that Photon is not implementing a quality assurance program, and this is a unsatisfactory condition and that Photon should be removed as an approved vendor. The fundamental issue is that the applicable programmatic requirements of ANSI N45.2 were not invoked upon Photon, and those requirements which were invoked were not implemented properly by Photon. Accordingly, insufficient assurance exists that procedure qualification and welder certification were done in accordance with the project programmatic requirements.
2) The audit results do contain sufficient cause for challenging both the qualification of Zack welding procedures and the certifications of Zack welders.

As a result of the above conclusion, Bechtel, Zack and CPCo have voluntarily agreed upon the following course of action:

1) Zack will develop a new procedure for the qualification of weld procedures and the certification of welders. This new procedure will address all the applicable programmatic requirements of ANSI N45.2 and Bechtel Specification 7220-G-23.
2) Zack will discontinue certifications of new welders to existing procedures effective 3:00 am, Tueday, November 30, 1982.
3) Zack, Bechtel and CPCo will participate in a task team effort to write new welding procedures. Zack will qualify these procedures in accordance with the programmatic requirements defined in item 1 above.

4) Zack will recertify all existing welders and certify new welders for safety related work in accordance with the procedure developed in item 1 and item 3 above.

5) Effective 3:00 am, Tuesday, November 30, 1982, Zack will discontinue all safety related welding. When items 1 and 3 above are completed and as individual welders are certified and recertified, those welders may resume welding safety related work.

6) Bechtel Project Engineering will evaluate the Zack Company technical justification of existing work to determine whether the programmatic failures have resulted in any actual loss of integrity to the welding. Bechtel Project Engineering will advise MPQAD as to whether any situation exists which may be reportable under 10CFR50.55(e)

7) MPQAD will revise audit report M01-336-2 and the associated findings and observations and reissue.

8) MPQAD, Zack and Bechtel recognize the project commitment to quality takes precedence over the project schedule.

9) Zack Company will prepare an outline of a recovery plan by 12/3/82 and will develop complete plan by 12/10/82.

OUTLINE OF RECOVERY PLAN/OPERATING PLAN

1. Establish a weld task team to develop, rev new weld procedures.

   a) task team to consist of (5) Zack perso
      (1) BPCo M & Q
      (2) BPCo Res.
      (2) CPCo Qualit
   initial meeting scheduled Wednesday 12

   b) task team to: (R. Harris Zack Co. to t
      1. Identify required procedures ar BPCo/Zack Weld Matrix - write a cedures.

      2. Establish prequalified PQR's.

      3. Establish schedule for balance qualified (est. 4 - 6 weeks).

      4. Establish schedule for qualific (est. 6 - 8 weeks after PQR qua

      5. Provide supervision, direction a of weld procedure qualifications qualifications.

2. Establish new 6 week schedule utilizing avai related work and non-welding safety related ment installation).

3. Assign Field Engineers and Foreman to task t statusing on safety related systems.

   a) Action items:
      1. Assign G. Gavits - Team Leader.
      2. Walkdown all safety related systems.
         -develop worklist/punchlist - status
         -identify all open RFI's - define nee status and construction impact.
         -identify all open NCR's - define sta struction impact.
         -work with MPQAD to define "Q" status above.
      3. Work with MPQAD to complete backlog o inspections.

4. Scheduling department - action items:

   a) Intergrate statusing information from wal scheduling mapper program

- update to latest information.
- complete programming and computer loading.

b) Maintain slow down scheduling on 6 week schedule basis only

c) Evaluate impacts to project schedule

d) Project recovery plans
   - estimate completion of weld problem 3 months.
   - using existing man loading as of 11/29/82.
   - using new demand schedule completion October 1982.
   - using first shift only full capacity.

5. Detailing: action items.

a) Establish back log
   - develop recovery schedule.
   - evaluate night shift (supervison requirements).
   - address needs for non-safety work.

James W Cook
Vice President - Projects, Engineering and Construction

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

December 6, 1982

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

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

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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 activivites.

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

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

Notary Public, Jackson County, Mich

My commission expires

JWC/JRS/jlh

CC RJCook, Midland Resident Inspector
DSHood, US NRC
WDShafer, US NRC, Region III
✓R.F. Warnick, US NRC, Region III

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