Attachment #1

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

May 24, 1983

Docket Nos. 50-329 OM,OL
50-330 OM,OL

MEMORANDUM FOR: The Atomic Safety and Licensing Board for the Midland Plant, Units 1 and 2

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

SUBJECT: VIOLATION OF HOLD TAG DURING REMEDIAL UNDERPINNING CONSTRUCTION (Board Notification BN #83-70)

In accordance with NRC procedures regarding Board Notifications, the enclosed memorandum is being provided for your information as material and relevant to quality assurance issues before the Board in the OM-OL hearing. The information concerns continued construction activities on underpinning pier KC-2 located beneath the north-east portion of the Turbine Building despite the existence of a nonconformance report and hold tag. The NRC is reviewing this matter with respect to the effectiveness of existing procedures to control quality.

Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

MIDLAND (For BNs)

Mr. J. W. Cook
Vice President
Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

cc: Stewart H. Freeman
Assistant Attorney General
State of Michigan Enviornmental
Protection Division
720 Law Building
Lansing, Michigan 48913

Mr. Roger W. Huston
Suite 220
7910 Woodmont Avenue
Bethesda, Maryland 20814

Mr. R. B. Borsum
Nuclear Power Generation Division
Babcock & Wilcox
7910 Woodmont Avenue, Suite 220
Bethesda, Maryland 20814

Mr. Don van Farrowe, Chief
Division of Radiological Health
Department of Public Health
P.O. Box 33035
Lansing, Michigan 48909

U.S. Nuclear Regulatory Commission
Resident Inspectors Office
Route 7
Midland, Michigan 48640

Mr. Paul A. Perry, Secretary
Consumers Power Company
212 W. Michigan Avenue
Jackson, Michigan 49201

Mr. Walt Apley
c/o Mr. Max Clausen
Battelle Pacific North West Labs (PNWL)
Battelle Blvd.
SIGMA IV Building
Richland, Washington 99352

Mr. I. Charak, Manager
NRC Assistance Project
Argonne National Laboratory
9700 South Cass Avenue
Argonne, Illinois 60439

James G. Keppler, Regional Administrator
U.S. Nuclear Regulatory Commission,
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Mr. Ron Callen
Michigan Public Service Commission
6545 Mercantile Way
P.O. Box 30221
Lansing, Michigan 48909

Mr. Paul Rau
Midland Daily News
124 McDonald Street
Midland, Michigan 48640

Billie Pirner Garde
Director, Citizens Clinic
for Accountable Government
Government Accountability Project
Institute for Policy Studies
1901 Que Street, N.W.
Washington, D. C. 20009

Commander, Naval Surface Weapons Center
ATTN: P. C. Huang
White Oak
Silver Spring, Maryland 20910

Mr. L. J. Auge, Manager
Facility Design Engineering
Energy Technology Engineering Center
P.O. Box 1449
Canoga Park, California 91304

Mr. Neil Gehring
U.S. Corps of Engineers
NCEED - T
7th Floor
477 Michigan Avenue
Detroit, Michigan 48226

Geotechnical Engineers, Inc.
ATTN: Dr. Steve J. Poulos
1017 Main Street
Winchester, Massachusetts 01890

DISTRIBUTION LIST FOR BOARD NOTIFICATION

Midland Units 1&2,
Docket Nos. 50-329/330

Charles Bechhoefer, Esq.
Ms. Lynne Bernabei
James E. Brunner, Esq.
Dr. John H. Buck
Myron M. Cherry, P.C.
Dr. Frederick P. Cowan
T. J. Creswell
Steve J. Galder, P.E.
Dr. Jerry Harbour
Mr. Wayne Hearn
Mr. James R. Kates
Frank J. Kelley, Esq.
Christine N. Kohl, Esq.
Mr. Wendell H. Marshall
Michael I. Miller, Esq.
Thomas S. Moore, Esq.
Mr. Paul Rau
Ms. Mary Sinclair
Ms. Barbara Stamiris
Frederick C. Williams, Esq.

Atomic Safety and Licensing
Board Panel
Atomic Safety and Licensing
Appeal Panel
Docketing and Service Section
Document Management Branch

ACRS Members

Dr. Robert C. Axtmann
Mr. Myer Bender
Dr. Max W. Carbon
Mr. Jesse C. Ebersole
Mr. Harold Etherington
Dr. William Kerr
Dr. Harold W. Lewis
Dr. J. Carson Mark
Mr. William M. Mathis
Dr. Dade W. Moeller
Dr. Milton S. Plesset
Mr. Jeremiah J. Ray
Dr. David Okrent
Dr. Paul C. Shewmon
Dr. Chester P. Siess
Mr. David A. Ward

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

MAY 1 3 1983

MEMORANDUM FOR: D. G. Eisenhut, Director, Division of Licensing, NRR

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

SUBJECT: RECOMMENDATION FOR NOTIFICATION OF LICENSING BOARD

In accordance with present NRC procedures regarding Board Notifications, the following information is being provided as constituting new information relevant and material to the Midland OM/OL proceedings. This information deals with the licensee's May 9, 1983 decision to stop Remedial Soils work due to violations of applied Hold Tag requirements.

The pertinent facts that relate to the stop work are as follows:

1. On May 6, 1983, MPQAD issued a nonconformance report (NCR) to document drift set deficiencies identified on previous Remedial Soils installations. As a result of the NCR, Hold Tags were applied.

2. On May 7, 1983, MPQAD issued an NCR to document drift set deficiencies identified during installation of pier KC-2 (East). As a result of the NCR, Hold Tags were applied.

3. On May 9, 1983, the licensee determined that work had continued on pier KC-2 (East) despite the presence of the Hold Tags. An additional NCR was issued to document the Hold Tag violations. At noon on May 9, 1983, the Field Soils Organization (FSO) stopped Remedial Soils work activities due to the Hold Tag violations. Although a formal Stop Work Order was not issued, 53 workers were sent home.

4. At 8:00 a.m. on May 10, 1983, the licensee resumed Remedial Soils work activities. The resumption of work was allowed after a resolution of differences between MPQAD and FSO pertaining to the significance of NCR's and Hold Tags. The NRC was informed of the Remedial Soils stop work by Stone and Webster (S&W) personnel during their meeting with the Midland Resident Inspectors to discuss the monthly S&W report of Remedial Soils work activities.

Dupe of 8406020127

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

J. J. Harrison for

R. F. Warnick, Director
Office of Special Cases

cc: A. B. Davis
J. J. Harrison
R. N. Gardner
R. B. Landsman
R. J. Cook

Attachment #2

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

NOV 19 1982

RECEIVED NOV 26 1982

Docket Nos: 50-329 OM, OL
and 50-330 OM, OL

Dr. Paul Shewmon, Chairman
Advisory Committee on Reactor Safeguards
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Dr. Shewmon:

Subject: Report on Midland Design and Construction Problems, Their Disposition, and Overall Effectiveness of the Effort to Assure Appropriate Quality

The ACRS Interim Report on Midland Plant, Units 1 and 2 dated June 8, 1982, requested, in part, "a report which discusses design and construction problems, their disposition, and the overall effectiveness of the effort to assure appropriate quality."

Supplement No. 1 to the Midland Safety Evaluation Report (SSER 1) replied that Region III would prepare such a report addressing construction problems for the period from the beginning of construction through June 30, 1982. The enclosed report responds to that reply. SSER 1 also indicates that a final report on overall quality of plant construction will be issued for the remaining period following completion of construction.

In addition, the staff is currently reviewing the several programs proposed by the applicant to independently verify design and construction of the Midland Plant. The results of this review will be addressed in a future supplement to the SER.

Sincerely,

Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

cc: See next page

8211300004

MIDLAND

Mr. J. W. Cook
Vice President
Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

cc: Michael I. Miller, Esq.
Ronald G. Zamarin, Esq.
Alan S. Farnell, Esq.
Isham, Lincoln & Beale
Three First National Plaza,
51st floor
Chicago, Illinois 60602

James E. Brunner, Esq.
Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201

Ms. Mary Sinclair
5711 Summerset Drive
Midland, Michigan 48640

Stewart H. Freeman
Assistant Attorney General
State of Michigan Environmental
Protection Division
720 Law Building
Lansing, Michigan 48913

Mr. Wendell Marshall
Route 10
Midland, Michigan 48640

Mr. Roger W. Huston
Suite 220
7910 Woodmont Avenue
Bethesda, Maryland 20814

Mr. R. B. Borsum
Nuclear Power Generation Division
Babcock & Wilcox
7910 Woodmont Avenue, Suite 220
Bethesda, Maryland 20814

Cherry & Flynn
Suite 3700
Three First National Plaza
Chicago, Illinois 60602

Mr. Paul Rau
Midland Daily News
124 McDonald Street
Midland, Michigan 48640

Lee L. Bishop
Harmon & Weiss
1725 I Street, N.W., Suite 506
Washington, D. C. 20006

Mr. Don van Farrowe, Chief
Division of Radiological Health
Department of Public Health
P.O. Box 33035
Lansing, Michigan 48909

Mr. Steve Gadler
2120 Carter Avenue
St. Paul, Minnesota 55108

U.S. Nuclear Regulatory Commission
Resident Inspectors Office
Route 7
Midland, Michigan 48640

Ms. Barbara Stamiris
5795 N. River
Freeland, Michigan 48623

Mr. Paul A. Perry, Secretary
Consumers Power Company
212 W. Michigan Avenue
Jackson, Michigan 49201

Mr. Walt Apley
c/o Mr. Max Clausen
Battelle Pacific North West Labs (PNWL)
Battelle Blvd.
SIGMA IV Building
Richland, Washington 99352

Mr. I. Charak, Manager
NRC Assistance Project
Argonne National Laboratory
9700 South Cass Avenue
Argonne, Illinois 60439

James G. Keppler, Regional Administrator
U.S. Nuclear Regulatory Commission,
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Mr. Ron Callen
Michigan Public Service Commission
6545 Mercantile Way
P.O. Box 30221
Lansing, Michigan 48909

cc: Commander, Naval Surface Weapons Center
ATTN: P. C. Huang
White Oak
Silver Spring, Maryland 20910

Mr. L. J. Auge, Manager
Facility Design Engineering
Energy Technology Engineering Center
P.O. Box 1449
Canoga Park, California 91304

Mr. Neil Gehring
U.S. Corps of Engineers
NCEED - T
7th Floor
477 Michigan Avenue
Detroit, Michigan 48226

Charles Bechhoefer, Esq.
Atomic Safety & Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. Frederick P. Cowan
Apt. B-125
6125 N. Verde Trail
Boca Raton, Florida 33433

Jerry Harbour, Esq.
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Geotechnical Engineers, Inc.
ATTN: Dr. Steve J. Poulos
1017 Main Street
Winchester, Massachusetts 01890

Midland Nuclear Power Plant, Units 1 and 2

Docket No. 50-329
Docket No. 50-330

REPORT ON DESIGN AND CONSTRUCTION PROBLEMS FOR PERIOD FROM START OF CONSTRUCTION THROUGH JUNE 30, 1982

Report Requested by Advisory Committee on Reactor Safeguards

I. Introduction

The following report prepared by the NRC, through its Region III office, discusses Midland construction problems, their disposition, and the overall effectiveness of the Consumers Power Company's efforts to ensure appropriate quality. The report was prepared at the request of the Advisory Committee on Reactor Safeguards and in response to commitments made in Supplement No. 1 of the Safety Evaluation Report. The report covers the period starting with the beginning of construction up to June 30, 1982. A final report will be issued on the above subjects for the period from July 1, 1982 through the completion of construction discussing the overall quality of plant construction.

II. Summary and Conclusions of Overall Effectiveness

Since the start of construction, Midland has experienced some significant problems resulting in enforcement action (enforcement statistics are summarized in Table 1). Following the identification of each of these problems, the licensee has taken action to correct the problems and to upgrade the QA program and QA/QC staff. The most prominent action has been an overview program which has been steadily expanded to cover safety related activities. In spite of the corrective actions taken, the licensee continues to experience problems in the implementation of quality in construction.

Significant construction problems identified to date include: (1) 1973 - cadweld splicing deficiencies (Paragraph C.2); (2) 1976 - rebar omissions (Paragraph F.5); (3) 1977 - bulge in the Unit 2 Containment Liner Plate (Paragraph G.3); (4) 1977 - tendon sheath location errors (Paragraph G.4); (5) 1978 - Diesel Generator Building settlement (Paragraph H.10); (6) 1980 - allegations pertaining to Zack Company heating, ventilating, and air conditioning (HVAC) deficiencies (Paragraph J.7); (7) 1980 - reactor pressure vessel anchor stud failures (Paragraph J.8); (8) 1981 - piping suspension system installation deficiencies (Paragraph K.4); and (9) 1982 - electrical cable misinstallations (Paragraph L.2).

Consumers Power has on repeated occasions not reviewed problems to the depth required for full and timely resolution. Examples are: (1) rebar omissions (1976); (2) tendon sheath location errors (1977); (3) Diesel Generator Building settlement (1978); and (4) Zack Company HVAC deficiencies (1980). In each of these cases the NRC, in its investigation, has determined that the problem was of greater significance than first reported or that the problem was more generic than identified by Consumers Power Company.

The Region III inspection staff believes problems have kept recurring at Midland for the following reasons: (1) Overreliance on the architect-engineer, (2) failure to recognize and correct root causes, (3) failure to recognize the significance of isolated events (4) failure to review isolated events for their generic application, and (5) lack of an aggressive quality assurance attitude.

A history of the Midland design and construction problems and their disposition, as identified and described in NRC inspection reports, is contained in the following section (III). This history is for the period from the beginning of construction through June 30, 1982.

Table I

ENFORCEMENT STATISTICS

YEAR	INSPECTIONS	NONCOMPLIANCES/ DEVIATIONS	HEADQUARTERS NOTICE OF VIOLATION	CIVIL PENALTIES	IAL's/ CAL's	ORDERS MODIFYING CP/ SHOW CAUSE ORDERS	SIGNIFICANT CONSTRUCTION PROBLEMS
1970	6	4	0	0	0	0	0
1971	2	0	0	0	0	0	0
1972	1	0	0	0	0	0	0
1973	11	6	0	0	0	1 (Cadwelds)	1 (Cadwelds)
1974	11	3	0	0	0	0	0
✓ 1975	7	0	0	0	0	0	0
✓ 1976	9	17	1 (Rebar)	0	1 (Rebar)	0	1 (Rebar)
✓ 1977	15	10	0	0	1 (Tendon Sheath)	0	(Bulge in Containment Liner and 2 Tendon Sheath Installation Errors)
✓ 1978	23	14	0	0	0	0	1 (Diesel Generator Bldg. Settlement)
✓ 1979	30	17	0	0	0	1 (Diesel Generator Bldg. Settlement)	0
✓ 1980	37	21	0	1 (Zack)	1 (Zack)	0	2 (Zack HVAC & Reactor Anchor Studs)
✓ 1981	23	21	0	0	1 (Pipe Suspension System)	0	1 (Pipe Suspension System)
✓ 1982	14	7	0	0	0	2 (Diesel Generator Bldg. Settlement)	1 (Electric Cable Routing)

(1983)

III. Design and Construction Problems As Documented in NRC Inspection Reports

A. 1970

Six inspection reports were issued in 1970. In July 1970, construction activities authorized by the Midland Construction Permit Exemption commenced. A total of four items of noncompliance were identified in 1970. These items are described below:

Four items of nonconformance were identified in Inspection Report Nos. 50-329/70-06 and 50-330/70-06 concerning the installation of concrete. The nonconformances regarded: (1) concrete placement activities violated ACI Code; (2) laboratory not performing tests per PSAR; (3) sampling not per ASTM; and (4) QA/QC personnel did not act on deviations when identified. Licensee corrective actions included: (1) Bechtel to provide a report attesting to the Auxiliary Building base slab where lack of consolidation was apparent; (2) a commitment to perform tests at frequencies specified in the PSAR; and (3) a commitment to train workers and the inspection staff. This matter was discussed during the Construction Permit Hearings and is considered closed.

B. 1971-1972

Three inspections were conducted during this period. No items of noncompliance were identified. Midland construction activities were suspended pending the pre-construction permit hearings.

On December 15, 1972, the Midland Construction Permit was issued.

C. 1973

Eleven inspection reports were issued in 1973 of which two pertained to special management meetings, two to vendor inspections, one to an audit of the architect engineer, and six to onsite inspections. A total of six items of noncompliance were identified during 1973. One significant construction problem was identified involving deficiencies in cadweld splicing of rebar (see Paragraph 2). These items/problems are described below:

1. Noncompliances involving two separate Appendix B criteria with five different examples were identified during a special audit of the architect engineer's Quality Assurance Program. The noncompliances were documented in Inspection Report Nos. 50-329/73-08 and 50-330/73-08. The items of noncompliance regarded: (1) inadequate requirements for quality record retention; (2) inadequate drawing control; (3) inadequate procedures; and (4) unapproved specifications used for vendor control. Licensee corrective actions included: (1) revision of Bechtel Nuclear Quality Assurance Manual; (2) revision of Midland Internal Procedures Manual; (3) personnel instructed to audit the status of the drawing stick files weekly; (4) project administrator assigned the

responsibility for maintenance of master stick file; and (5) project engineer and staff to perform monthly surveillance of project record file. Inspection Report Nos. 50-329/74-03 and 50-330/74-03 concluded that appropriate corrective actions had been taken by the licensee relative to the identified violations.

2. One significant construction problem was identified during 1973. It involved cadweld splicing deficiencies and resulted in the issuance of a Show Cause Order. Details are as follows:

A routine inspection, conducted on November 6-8, 1973, identified eleven examples of four noncompliance items relative to rebar cadwelding operations. The noncompliances were documented in Inspection Report Nos. 50-329/73-10 and 50-330/73-10. These items were summarized as: (1) untrained cadweld inspectors; (2) rejectable cadwelds accepted by QC inspectors; (3) records inadequate to establish cadwelds met requirements; and (4) inadequate procedures.

As a result, the licensee stopped work on cadweld operations on November 9, 1973, which in turn stopped rebar installation and concrete placement work. The licensee agreed not to resume work until the NRC reviewed and accepted their corrective action. A Show Cause Order was issued on December 3, 1973, formally suspending cadwelding operations. On December 6-7, 1973, Region III and Headquarters personnel conducted a special inspection and determined that construction activities could be resumed in a manner consistent with quality criteria. Licensee corrective actions included: (1) the revision of the Bechtel specification to reflect requalification requirements; (2) development of instructions requiring that work specifications be reviewed prior to Class 1 work; (3) the establishment of provisions for Consumers Power QA review of work procedures; and (4) the establishment of procedures for the audit of Class 1 work.

The Show Cause Order was modified on December 17, 1973 allowing resumption of cadwelding operations based on inspection results. The licensee answered the Show Cause Order on December 29, 1973 committing to revise and improve the QA manuals and procedures and make QA/QC personnel changes.

On September 25, 1974, the Hearing Board found that the licensee was implementing its QA program in compliance with regulations and that construction should not be stopped.

D. 1974

Eleven inspection reports were issued in 1974 of which one pertained to a vendor inspection, one to an inspection at the licensee's corporate offices, and nine to onsite inspections. Three items of noncompliance were identified during 1974. These items are described below:

1. One noncompliance was identified in Inspection Report No. 50-329/74-01 and 50-330/74-01 concerning the use of unapproved procedures during the preparation of containment building liner plates for erection. Licensee corrective actions included: (1) intensive review of liner plate records for accuracy; (2) issuance of nonconformance report; (3) requirement imposed that unapproved copies of procedures transmitted to the site be marked "advance copy;" and (4) identification of procedure approval status. The licensee's actions in regards to this matter were reviewed and the noncompliance closed by the NRC as documentad in Inspection Report Nos. 50-329/74-01 and 50-330/74-01.

2. One noncompliance was identified in Inspection Report Nos. 50-329/74-04 and 50-330/74-04, concerning the use of a weld method which was not part of the applicable weld procedure. Licensee corrective actions included: (1) issuance of a nonconformance report; (2) repair of subject welds; (3) reinstruction of welders; and (4) increased surveillance of containment liner plate field fabrications. The licensee's actions in regards to this matter were reviewed and the noncompliance closed by the NRC as documented in Inspection Report Nos. 50-329/74-04 and 50-330/74-04.

3. One noncompliance was identified in Inspection Report Nos. 50-329/74-11 and 50-330/74-11 concerning the failure of QC inspections to identify nonconforming rebar spacing. This violation is discussed further in the 1976 section of this report, Paragraph F.5.

E. 1975

Seven inspection reports were issued in 1975 of which one pertained to a meeting in Region III, one to an inspection at the licensee's corporate offices, and five to onsite inspection.

No noncompliances were identified in 1975, however, the licensee in March and August of 1975 identified additional rebar deviations and omissions. This matter is further discussed in the 1976 section of this report, Paragraph F.5.

F. 1976

Nine inspection reports were issued in 1976 pertaining to nine onsite inspections. A total of seventeen items of noncompliance were identified during 1976. One significant construction problem was identified involving rebar omissions/placement errors and the issuance of a Headquarters Notice of violation (see Paragraph 5). These items/problems are described below:

1. Three items of noncompliance were identified in Inspection Report Nos. 50-329/76-01 and 50-330/76-01. These items regarded: (1) inadequate concrete oven temperature controls; (2) no measures to control nonconforming aggregate; and (3) failure to dispose of nonconforming aggregate as required. Licensee corrective actions included: (1) implementing a requirement for the reverification of oven temperature controls every three months; (2) removal of nonconforming aggregate from the batch plant area; (3) modification of subcontractor's QA manual, and (4) training of subcontractor's personnel to the revised QA manual. The corrective actions implemented by the licensee in regards to these noncompliances were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/76-02 and 50-330/76-02.

2. Two items of noncompliance were identified in Inspection Report Nos. 50-329/76-02 and 50-330/76-02. These items regarded: (1) the Vice President of Engineering Inspection did not audit test reports as required; and (2) corrective actions required by audit findings had not been performed. Corrective actions taken by the licensee included revising the U.S. Testing QA manual. The licensee's corrective actions taken in regards to these matters were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/76-08 and 50-330/76-08.

3. Three items of noncompliance were identified in Inspection Report Nos. 50-329/76-08 and 50-330/76-08. These items regarded: (1) inadequate classification, review, and approval of field engineering procedures and instructions; (2) inadequate documentation of concrete form work deficiencies; and (3) inadequate control of site storage of post tension embedments. Licensee corrective actions included: (1) revision of the Bechtel Nuclear QA manual; (2) revision of Bechtel field procedure for "Initiating and Processing Field Procedures and Instructions;" (3) initiation of Bechtel Discrepancy Report; (4) training sessions for Bechtel QC; and (5) revision of storage inspection procedures. The licensee's corrective actions in regards to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/77-01 and 50-330/77-01.

4. Two items of noncompliance were identified in Inspection Report Nos. 50-329/76-09 and 50-330/76-09. These items regarded: (1) noncompliance report not written to identify broken reinforcing steel; and (2) hold down studs for the reactor vessel skirt were not protected. Licensee corrective actions included: (1) inspection of all rebar dowels; (2) initiation of new field procedure; and (3) initiation of new

procedure for inspecting reactor vessel and steam generator anchor bolts. The licensee's corrective actions in regards to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/77-01 and 50-330/77-01.

5. One significant construction problem was identified during 1976. It involved rebar omissions/placement errors and the issuance of a Headquarters Notice of Violation. Details are as follows:

During an NRC inspection conducted in December 1974 the licensee informed the inspector that an audit had identified rebar spacing problems in the Unit 2 containment. The failure of QC inspectors to identify the nonconforming rebar spacing was identified in the 1974 NRC inspection report as an item of noncompliance. (See the 1974 section of this report, Paragraph D.3.) This matter was subsequently reported by the licensee as required by 10 CFR 50.55(e).

Additional rebar deviations and omissions were identified in March and August 1975 and in April, May and June 1976.

Five items of noncompliance regarding reinforcement steel deficiencies were identified in Inspection Report Nos. 50-329/76-04 and 50-330/76-04. These items regarded: (1) no documented instructions for the drilling and placement of reinforcement steel dowels; (2) nonconformance reports concerning reinforcement steel deficiencies were not adequately evaluated; (3) inadequate inspections of reinforcement steel; (4) inadequate evaluations of a nonconformance report problem relative to 10 CFR 50.55(e) reportability requirements; and (5) results of reviews, interim inspections, and monitoring of reinforcement steel installations were not documented.

The licensee's response, dated June 18, 1976, listed 21 separate items (commitments) for corrective actions. A June 24, 1976 letter from the licensee provided a plan of action schedule for implementing the 21 items. The licensee suspended concrete placement work until the items addressed in the licensee's June 24 letter were resolved or implemented. This commitment was documented in a Region III Immediate Action Letter (IAL) to the licensee, dated June 25, 1976.

Rebar installation and concrete placement activities were resumed in early July, 1976 following satisfactory completion of the corrective actions and verification by Region III as documented in Inspection Report Nos. 30-329/76-05 and 50-330/76-05.

A subsequent inspection to followup on reinforcing steel placement problems identified two noncompliances. These noncompliances are documented in Inspection Report Nos. 50-329/76-07 and 50-330/76-07. The noncompliances regarded: (1) failure to follow procedures; and (2) inadequate Bechtel inspections of rebar installations. The inspection report documents licensee corrective actions which included: (1) removal of cognizant field engineer and lead Civil engineer from the project; (2) removal of lead Civil Quality Control engineer from the project; (3) reprimand of cognizant inspector; (4) additional training given to cognizant foremen, field engineers, superintendants and Quality Control inspectors; and (5) assignment of additional field engineers and Quality Control engineers. The licensee's actions in regard to these items were reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/76-07 and 50-330/76-07.

As a result of the rebar omissions and placement errors, a Headquarters Notice of Violation was issued on August 13, 1976.

Additional actions taken by the licensee included the establishment of an overview inspection program to provide 100% reinspection of embedments by the licensee following acceptance by the contractor Quality Control personnel.

Additional actions taken by the contractor included: (1) personnel changes and retraining of personnel; (2) preparation of a technical evaluation for the acceptability of each identified construction deficiency; and (3) improvement in the QA/QC program coverage of civil work.

G. 1977

Twelve inspections pertaining to Unit 1 and fifteen inspections pertaining to Unit 2 were conducted in 1977. Ten items of noncompliance were identified during 1977. Two significant construction problems were identifed involving a bulge in the Unit 2 containment liner plate (see Paragraph 3) and errors in the placement of tendon sheathings (see Paragraph 4). These items/problems are described below:

1. Five examples of noncompliance with Criterion V of 10 CFR 50, Appendix B, were identified in Inspection Report Nos. 50-329/77-05 and 50-330/77-08. The examples of noncompliance regarded: (1) inadequate clearance between concrete wall and pipe support plates; (2) assembly of pipe supports using handwritten drawing changes; (3) inadequate preparation and issue of audit reports; (4) inadequate review of nonconformance reports and audit findings for trends; and (5) inadequate tagging of defective measuring equipment. Licensee corrective actions included: (1) clarification of

design and acceptance criteria contained in pertinent specifications; (2) modification and review of Quality Control Instructions; (3) issuance of two field procedures relative to field modifications of piping hanger drawings; (4) staffing of additional QA personnel at the site; (5) closer management attention; and (6) additional training in the area of tagging. The licensee actions in regard to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/77-08, 50-330/77-11, 50-329/78-01, and 50-330/78-01.

2. Three items of noncompliance were identified in Inspection Report Nos. 50-329/77-09 and 50-330/77-12. The items regarded: (1) failure to follow audit procedures; (2) failure to qualify stud welding procedures; and (3) inadequate welding inspection criteria. Licensee corrective actions included: (1) administrative instruction issued to require the audit manager to obtain a semi-monthly audit findings status report from the project manager; (2) administrative instruction issued for the close out and followup of internal corrective action requests; (3) revision of Quality Control Instruction; (4) special inspections and audit; and (5) prescribing specific acceptance criteria. The licensee's actions in regard to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/78-01, 50-330/78-01, 50-329/78-05, and 50-330/78-05.

3. A significant construction problem involving a bulge in the Unit 2 containment liner plate was identified in 1977. Details of the liner plate bulge follow:

   The initial identification by the licensee of a bulge in the Unit 2 liner plate occurred on February 26, 1977. The liner plate bulge occurred between column line azimuths 250 degrees and 270 degrees and between elevations 593 and 700. Inspection Report No. 50-330/77-02 documents a special inspection concerning the liner plate bulge. This report further identifies an item of noncompliance relative to the failure of the licensee to report the bulge deficiency pursuant to the requirements of 10 CFR 50.55(e). The licensee's corrective actions in regard to this item were reviewed and the item closed by the NRC as documented in Inspection Report No. 50-330/77-14.

   The cause of the liner plate bulge was determined to be due to a leaking 2 inch water line installed in the containment concrete as a construction convenience. It was theorized that the water line froze, started to leak, allowing water to seep behind the liner. The water line was supplied by a construction water pump that was set to cycle between 100 and 130 PSI. This pressure was considered to be sufficient to cause the liner plate bulge.

A meeting was held on April 4, 1977 at the Ann Arbor, Michigan Office of Bechtel to review the original design and construction concept of the containment liner, the procedures and actions taken during the removal of bulge affected zones, the investigation activities and results, and to ascertain the concepts involved in the licensee's proposed repair program.

The containment liner bulge deficiency repair was started on August 1, 1977. Inspection Report No. 50-330/77-11 documents the observed fit up and welding of the first four foot lift of replacement liner plate installed. The completion of repair and the repair records were subsequently reviewed as documented in Inspection Report No. 50-330/79-25.

4. A second significant construction problem involved tendon sheath placement errors and resulted in an Immediate Action Letter (IAL). Details are as follows:

The licensee reported, on April 19, 1977, the discovery of an error in the Unit 1 containment building which resulted in two tendon sheathings (H32-036 and H13-036) being misplaced, and two tendon sheathings (H32-037 and H13-037) being omitted. As shown on pertinent vendor drawings, these four tendons were to be deflected downward to clear the two main steam penetrations at center line elevation 707' 0". Concrete had been placed to a construction joint at elevation 703' 7" approximately one week before these tendon deficiencies were discovered.

Corrective actions resulted in the rerouting of tendon sheathing H32-037, originally planned for below the penetration, to a new alignment above the penetration. Tendon sheathing H13-037 was installed below the penetration. Tendon sheathings H32-036 and H13-036 did not require modification.

The tendon sheath placement errors and the past history of rebar placement errors indicated the need for further NRC evaluation of the licensee's QA/QC program. As a result, an IAL was issued to the licensee on April 29, 1977. Licensee commitments addressed by this IAL included: (1) NRC notification prior to repairs or modifications involving the placement of concrete in the area of the misplaced and omitted tendon sheaths; (2) identification of the cause of the tendon sheath deficiencies and implementation of required corrective action; (3) expansion of the licensee's QC overview program; (4) NRC notification of all embedment placement errors identified after QC acceptance; (5) review and revision of QC inspection procedures; and (6) training of construction and inspection personnel.

A special QA program inspection was conducted in May 1977 as documented in Inspection Report Nos. 50-329/77-05 and 50-330/77-08. The inspection team was made up of personnel from Region I, Region III, and Headquarters. It was the consensus of opinion of the inspectors that the licensee's program was acceptable.

The licensee issued the final 50.55(e) report on this matter on August 12, 1977. Final onsite review was conducted and documented in Inspection Report Nos. 50-329/77-08 and 50-329/79-15.

H. 1978

Twenty-two inspections and one investigation were conducted during 1978. A total of fourteen items of noncompliance were identified in 1978. One significant construction problem was identified involving excessive settlement of the Diesel Generator Building foundation (see Paragraph 10). These items/problems are described below:

1. Three items of noncompliance were identified in Inspection Report Nos. 50-329/78-03 and 50-330/78-03. These items regarded: (1) inadequate inspections of welds on cable tray supports; (2) inadequate control of welding voltage and amperage as required by AWS; and (3) inadequate documentation of repairs on purchased equipment. Licensee corrective actions included: (1) additional training given Quality Control Engineers and craft welders; (2) revision of pertinent technical specifications and weld acceptance requirements; (3) revision of welding procedures; (4) revisions of vendor QA manual; and (5) reinspections and engineering evaluations. The licensee actions in regard to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/78-15, 50-330/78-15, 50-329/79-25, 50-330/79-25, 50-329/81-12, 50-330/81-12, 50-329/79-22, and 50-330/79-22.

2. Two items of noncompliance were identified in Inspection Report Nos. 50-329/78-05 and 50-330/78-05. These items regarded: (1) inadequate control of welding filler material; and (2) inadequate protection of spool pieces. Licensee corrective actions included: (1) additional instructions given to welding personnel; (2) generation of nonconformance report to require Bechtel to perform a thorough inspection of the facility, correct and document discrepancies noted, and instruct craft personnel. The licensee actions in regard to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/78-05, 50-330/78-05, 50-329/79-22, and 50-330/79-22.

3. Two examples of noncompliance with one 10 CFR 50 Appendix B criterion were identified in Inspection Report Nos. 50-329/78-07 and 50-330/78-07. These examples regarded: (1) inadequate

control of drawings; and (2) inadequate drawing control procedures. Licensee corrective actions included: (1) Zack and Bechtel revised drawing control procedures; and (2) extensive audits of drawing controls. The licensee actions in regard to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/79-25 and 50-330/79-25.

4. One item of noncompliance was identified in Inspection Report No. 50-330/78-09 concerning inadequate backing gas flow rate during welding operations. Licensee corrective actions included: (1) revision of Bechtel welding procedure specifications; (2) revision of Bechtel Quality Control Instruction; and (3) additional training for all welding Quality Control Engineers. The licensee's actions in regard to this item were subsequently reviewed and the item closed by the NRC as documented in Inspection Report No. 50-330/78-16.

5. Two items of noncompliance were identified in Inspection Report Nos. 50-329/78-13 and 50-330/78-13. The items regarded: (1) inadequate inspection of weld joints; and (2) inadequate storage of Class 1E equipment. Licensee corrective actions included: (1) revision of welding specifications; (2) additional instructions to QC inspectors; (3) additional overinspections; (4) upgrade of administrative procedures; and (5) actions to bring storage environment within controlled specifications. The licensee's actions in regard to these items were reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/78-13 and 50-330/78-13.

6. Two items of noncompliance were identified in Inspection Report Nos. 50-329/78-15 and 50-330/78-15. These items regarded: (1) nonconforming welds on Main Steam Isolation Valve support structures; and (2) inadequate corrective action taken to repair nonconforming Nelson Stud weld attachments. Licensee corrective actions included: (1) responsible welding Quality Control Engineer required to attend training course; (2) defective welds reworked; and (3) engineering evaluation. The licensee's actions in regard to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/79-22, 50-330/79-22, 50-329/79-25 and 50-330/79-25.

7. One deviation was identified in Inspection Report No. 50-330/78-16 concerning the failure to meet ASME code requirements for nuclear piping. Licensee corrective actions included the determination that the impact test values of the pipe material in question met the code requirements, and the UT thickness measurements made by ITT Grinnell were in error and

voided by measurements made by Bechtel. The licensee's actions in regard to this item were subsequently reviewed and the item closed by the NRC as documented in Inspection Report No. 50-330/79-24.

8. One item of noncompliance was identified in Inspection Report Nos. 50-329/78-17 and 50-330/78-17 regarding the failure to follow weld procedures pertaining to the repair welding of cracked welds on the personnel air locks. The licensee's corrective actions included steps to revise affected drawings and to update the stress analysis report for the air locks. The corrective actions taken by the licensee will be reviewed during future NRC inspections.

9. One item of noncompliance was identified in Inspection Report Nos. 50-329/78-22 and 50-330/78-22 concerning the failure to perform specified maintenance and inspection activities on Auxiliary Feed Pumps. Licensee corrective actions included: (1) training of pertinent Quality Control engineers; (2) transition of personnel in QC department relative to storage and maintenance activities; and (3) inspections and evaluations of omitted maintenance. The licensee's actions in regard to this item were subsequently reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/78-22 and 50-330/78-22.

10. One significant construction problem was identified during 1978. It involved excessive settlement of the Diesel Generator Building foundation. Details are as follows:

The licensee informed the Region III office on September 8, 1978, per requirements of 10 CFR 50.55(e), that settlement of the Diesel Generator foundations and structures was greater than expected.

Fill material in this area was placed between 1975 and 1977, with construction starting on the diesel generator building in mid-1977. Review of the results of the Region III investigation/inspection into the plant fill/Diesel Generator building settlement problem indicate many events occurred between late 1973 and early 1978 which should have alerted Bechtel and the licensee to the pending problem. These events included nonconformance reports, audit findings, field memos to engineering, and problems with the administration building fill which caused modification and replacement of the already poured footing and replacement of the fill material with lean concrete.

Causes of the excessive settlement included: (1) inadequate placement method - unqualified compaction equipment and excessive lift thickness; (2) inadequate testing of the soil material; (3) inadequate QC inspection procedures; (4) unqualified Quality Control inspectors and field engineers; and (5) overreliance on inadequate test results.

Lead technical responsibility and program review for this issue was transferred to NRR from IE by memo, dated November 17, 1978.

During 1978 the licensee conducted soil borings in the area of the Diesel Generator building and in other plant fill areas. In addition, a team of consultants who specialize in soils was retained by the licensee to provide an independent evaluation and provide recommendations concerning the soil conditions existing under the Diesel Generator building.

As previously stated, an investigation was initiated in December 1978 by the NRC to obtain information relating to design and construction activities affecting the Diesel Generator Building foundation and the activities involved in the identification and reporting of unusual settlement of the building. The results of the investigation and additional developments in regard to this matter are discussed in the 1979 section of this report, Paragraph I.11.

I. 1979

Thirty inspection reports were issued in 1979 of which one pertained to an onsite management meeting, two to investigations, one to a vendor inspection, one to a meeting in Region III, and twenty-five to onsite inspections. A total of seventeen items of noncompliance were identified in 1979. These items are described below:

1. One item of noncompliance was identified in Inspection Report Nos. 50-329/79-10 and 50-330/79-10 concerning inadequate measures to assure that the design basis was included in drawings and specifications. Licensee corrective actions included: (1) revision to Midland FSAR; and (2) revision to pertinent specification. The licensee's actions in regard to this item were subsequently reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/79-19 and 50-330/79-19.

2. Three items of noncompliance were identified in Inspection Report Nos. 50-329/79-12 and 50-330/79-12. The items were: (1) inadequate corrective action in regard to drawing controls; (2) discrepancy in Zack Welding Procedure Specification; and (3) inadequate control of purchased material. Licensee corrective actions included: (1) audit of drawing control program; (2) revision to drawing control requirements; (3) revision of Zack Welding Procedure Specification; (4) review of other Zack procedures; (5) missing data added to documentation packages; and (6) audits of other documentation packages. The actions taken by the licensee were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/81-01, 50-330/81-01, 50-329/80-15, 50-330/80-16, 50-329/79-22, and 50-330/79-22.

3. One item of noncompliance was identified in Inspection Report No. 50-330/79-13 concerning the failure to inspect all joints and connections on the Incore Instrument Tank as prescribed in the hydrostatic test procedure. Licensee corrective actions included a supplemental test of the Incore Instrument Tank and the initiation of a supplemental test report. The licensee's actions in regards to this matter were subsequently reviewed and the item closed by the NRC as documented in Inspection Report No. 50-330/80-38.

4. One item of noncompliance was identified in Inspection Report No. 50-330/79-14 concerning the use of a wad of paper in making a purge dam during welding activities. Licensee corrective actions included: (1) revision of pertinent procedures; (2) revision of pertinent Quality Control inspection checklist; and (3) training sessions for welders and Quality Control inspectors. The licensee's actions in regards to this matter were subsequently reviewed and the item closed by the NRC as documented in Inspection Report No. 50-330/80-16.

5. One item of noncompliance was identified in Inspection Report Nos. 50-329/79-18 and 50-330/79-18 concerning inadequate controls to protect materials and equipment from welding activities. Licensee corrective actions included training sessions for cognizant Field Engineers, Superintendents, General Foremen and Foremen. The licensee's actions in regards to this matter were subsequently reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/80-15 and 50-330/80-16.

6. Two items of noncompliance were identified in Inspection Report Nos. 50-329/79-19 and 50-330/79-19. These items regarded: (1) failure to ensure that appropriate quality standards were in the specification for structural backfill; and (2) Quality Control inspection personnel performing containment prestressing activities were not being qualified as required. Licensee corrective actions included: (1) revision of pertinent specification; (2) examination given to Level I and Level II inspector; and (3) reinspection of selected tendons. The licensee's actions in regards to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-330/80-09, 50-329/80-04 and 50-330/80-04.

7. One item of noncompliance was identified in Inspection Report Nos. 50-329/79-20 and 50-330/79-20 concerning inadequate controls for welding activities pertaining to 4.16 KV switchgear. Licensee corrective actions included: (1) correction of relevant records; (2) additional training for Quality Control Engineers; and (3) additional training for the Quality Control Document Coordinator. The licensee's actions were subsequently reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/80-15 and 50-330/80-16.

8. One item of noncompliance was identified in Inspection Report No. 50-330/79-22 concerning inadequate weld rod controls. Licensee corrective actions included a training session for cognizant welding personnel. The actions taken by the licensee in regards to this matter were subsequently reviewed and the item closed by the NRC as documented in Inspection Report No. 50-330/80-01.

9. One item of noncompliance was identified in Inspection Report Nos. 50-329/79-26 and 50-330/79-26 concerning failure to follow procedures relative to the shipment of auxiliary feed water pumps to the site with nonconforming oil coolers. Licensee corrective actions included: (1) reinstruction given to cognizant engineer; and (2) Supplied Deviation Disposition Request (SDDR) generated by the vendor. The licensee's actions in regards to this matter were reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/79-26 and 50-330/79-26.

10. One item of noncompliance was identified in Inspection Report Nos. 50-329/79-27 and 50-330/79-27 concerning the violation of QC Hold Tags. Licensee corrective actions included: (1) a training session for Construction Supervisors and Field Engineers; and (2) a Field Instruction on Quality Control Hold Tags was issued. The licensee's actions in regards to this matter were subsequently reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/81-04 and 50-330/81-04.

11. As a followup to the significant construction problem identified in 1978 (see Paragraph H.10), an investigation was initiated in December, 1978 to obtain information relating to design and construction activities affecting the Diesel Generator Building foundations and the activities involved in the identification and reporting of unusual settlement of the building. The investigation findings were documented in Inspection Report Nos. 50-329/78-20 and 50-330/78-20, dated March 22, 1979. Information obtained during this investigation indicated: (1) a lack of control and supervision of plant fill activities contributed to the inadequate compaction of foundation material; (2) corrective action regarding nonconformances related to plant fill was insufficient or inadequate as evidenced by the repeated deviations from specification requirements; (3) certain design bases and construction specifications related to foundation type, material properties, and compaction requirements were not followed; (4) there was a lack of clear direction and support between the contractor's engineering office and construction site personnel; and (5) the FSAR contained inconsistent, incorrect and unsupported statements with respect to foundation type, soil properties, and settlement values. Nine examples of noncompliance involving four different 10 CFR 50, Appendix B Criteria were identified in the subject inspection report.

Meetings were held on February 23, 1979 and March 5, 1979 at the NRC Region III office to discuss the circumstances associated with the settlement of the Diesel Generator Building at the Midland facility. The NRC staff stated that it's concerns were not limited to the narrow scope of the settlement on the Diesel Generator Building, but extended to various buildings, utilities and other structures located in and on the plant area fill. In addition, the staff expressed concern with the Consumers Power Company Quality Assurance Program. Under the authority of Section 182 of the Atomic Energy Act of 1954, as amended, and Section 50.54(f) of 10 CFR Part 50, additional information was requested regarding the adequacy of the fill and the quality assurance program for the Midland site in order for the Commission to determine whether enforcement action such as license modification, suspension or revocation should be taken. Question 1 of the 50.54(f) letter dated March 21, 1979 requested information regarding the quality assurance program. On April 24, 1979, Consumers Power Company submitted the initial response to the 50.54(f) request, Questions 1 through 22. As a result of the NRC staff review of Question 1, the NRC concluded that the information provided was not sufficient for a complete review. Subsequently, on September 11, 1979, the NRC issued a request for additional quality assurance information (Question 23). On November 13, 1979, Consumers Power Company submitted Revision 4 to the 50.54(f) responses which included response to Question 23. As a result of the Region III investigation report and CPCo responses, the NRC issued an Order modifying construction Permits No. CPPR-81 and No. CPPR-82, dated December 6, 1979. This order prohibited further soils related activities until the submission of an amendment to the application seeking approval of the Remedial Soils work with the provision that the order would not become effective in the event that the licensee requested a hearing. Due to the licensee's decision to request a hearing this order forms the basis for the ongoing ASLB Hearings.

During 1979, the licensee continued soil boring operations in order to identify and develop the quality of material in the plant area fill and beneath safety related structures. The licensee completed a program regarding the application of a surcharge of sand material in and around the Diesel Generator Building. This surcharge was an attempt to accelerate any future settlement of the Diesel Generator Building by consolidating the foundation material.

Additional developments in this matter are discussed in the 1980 section of this report, Paragraph J.9.

J. 1980

Thirty-seven inspection reports were issued in 1980 of which two pertained to meetings at the licensee's corporate office, one to a meeting in Glen Ellyn, two to investigations, and thirty-two to onsite inspections. A total of twenty-one items of noncompliance were identified during 1980. Two significant construction problems were identified involving quality assurance problems at the Zack Company (see Paragraph 7) and deficient reactor vessel anchor studs (see Paragraph 8). These items/problems are described below:

1. Two items of noncompliance and one deviation were identified in Inspection Report Nos. 50-329/80-01 and 50-330/80-01. These items regarded: (1) a welder welding on material of thickness which exceeded his qualified range; (2) failure to date and sign the cleanliness inspection of Unit 2 Service Water System valve; and (3) failure to implement a design change or prepare a Field Change Request. Licensee corrective actions in regards to the items of noncompliance included: (1) testing and qualification of the subject welder; (2) reinstruction of QC engineer; (3) review of the inspection records for additional valves; and (4) the revision of applicable turnover procedures. The licensee's actions in regards to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/80-20, 50-330/80-21, 50-329/82-04 and 50-330/82-04.

2. One item of noncompliance was identified in Inspection Report No. 50-329/80-09 concerning the failure to maintain levelness requirements during core support assembly lifts. The licensee's corrective actions in response to the item of noncompliance included the issuance of a nonconformance report and the commitment to ensure compliance with Quality Control procedures. The licensee's corrective actions in regards to this matter will be reviewed during subsequent NRC inspections.

3. One item of noncompliance was identified in Inspection Report Nos. 50-329/80-20 and 50-330/80-21 concerning the failure of a Bechtel purchase order for E7018 welding rods to specify the applicable codes. Licensee commitments in regards to corrective actions included an audit of the ordering and receiving records of weld filler material. The licensee's corrective actions in regards to this matter will be reviewed during subsequent NRC inspections.

4. One item of noncompliance was identified in Inspection Report Nos. 50-329/80-21 and 50-330/80-22 concerning the failure to perform an audit of Photon Testing, Inc. for services to qualify Zack Company welders. Licensee corrective actions included an audit of Photon Testing, Inc. The licensee's actions in regards to this matter were subsequently reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/81-03 and 50-330/81-03.

5. One item of noncompliance was identified in Inspection Report Nos. 50-329/80-28 and 50-330/80-29 concerning the bypassing of a hold point on a Pressure Surge System weld. The inspection report further identifies that action had been taken to correct the identified noncompliance and to prevent recurrence. The item is closed.

6. One item of noncompliance was identified in Inspection Report Nos. 50-329/80-31 and 50-330/80-32 concerning substantial delays by the licensee in making 10 CFR Part 21 reportability determinations. Licensee corrective actions included training sessions for key personnel in recognizing 10 CFR 21 reporting obligations. The licensee's actions in regards to this matter were subsequently reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/81-07 and 50-330/81-07.

7. A significant construction problem involving quality assurance problems at the Zack Company, the heating, ventilating, and air condition contractor was identified in 1980. Details of the Zack problem follow:

   During March and April, 1980 the NRC received numerous allegations pertaining to the Zack Company. The Zack Company is the heating, ventilation and air conditioning (HVAC) subcontractor at the Midland construction site. The allegations dealt with material traceability, violations of procedures, falsification of documents, and the training of quality control inspectors.

   As the result of the allegations, an investigation was initiated by the NRC. During the initial phases of the investigation, the NRC determined that Consumers Power Company had issued a Management Corrective Action Request (MCAR), dated January 8, 1980, pertaining to the Zack Company. The MCAR showed that Zack had failed to initiate corrective action in a timely manner on a large number of nonconformance reports and audit findings and had failed to address other requirements and commitments of the quality program.

   Consumers Power Company had issued seven nonconformance reports during the period of May 23 to October 2, 1979 all of which recommended 100% reinspection of work as a corrective action. The investigation determined that as of March 19, 1980, corrective action had not been completed on any of the nonconformance reports.

   Based on preliminary findings during the investigation, which revealed some instances of continued nonconformance in the implementation of Zack's Quality Assurance Program, an Immediate Action Letter (IAL) was issued to the licensee on March 21, 1980. The IAL stated the NRC's understanding that a Stop Work Order had been issued to the Zack Corporation for all its safety related construction activities.

Seventeen examples of noncompliance involving eight different 10 CFR 50, Appendix B, criteria were identified during the investigation. The investigation findings are documented in Inspection Report Nos. 50-329/80-10 and 50-330/80-11. The licensee's actions in regards to the items of noncompliance were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/82-15 and 50-330/82-15.

On June 30, 1980, the NRC received from the licensee a letter documenting a Program Plan for resumption of safety related work by the Zack Company. The licensee identified that corrective actions required prior to lifting the Stop Work included: (1) the review and approval of all Field Quality Control Procedures and specific Weld Procedure Specifications; (2) the review and approval of the revised Zack QA Manual; (3) the training and certification of the QC personnel; and (4) the training of site production personnel.

Subsequent to followup NRC inspections to determine the effectiveness of licensee corrective actions, it was determined by the NRC, on August 14, 1980 that HVAC safety related work could resume.

The Bechtel Power Corporation released the Zack Company from the Stop Work Order by letter dated August 14, 1980.

As a result of the aforementioned investigation findings, the NRC imposed a Civil Penalty, on January 7, 1981, on Consumers Power Company for the amount of $38,000.

8. The second significant construction problem involved reactor pressure vessel anchor stud failures. Details are as follows:

On September 14, 1979, Consumers Power Company personnel notified the NRC of the discovery of a broken reactor vessel anchor stud on the Midland Unit 1 reactor vessel. On October 12, 1979, this condition was reported under the requirements of 10 CFR 50.55(e). Two other studs were subsequently found to be broken. As this condition reflected a significant deficiency, an NRC investigation was initiated in February 1980 to review the materials, manufacturer, and installation of the studs.

The investigation findings, as documented in Inspection Report Nos. 50-329/80-13 and 50-330/80-14, indicate several Quality Assurance deficiencies: (1) lack of licensee involvement; (2) failure to advise the heat treater of different heats of material; (3) inadequate document review; (4) failure to respond to indications that the studs were deficient; (5) failure to review materials previously purchased when the purchase specification was revised; and (6) miscalculation of

the stud stress area resulting in a slight over-specification stressing of the studs (this item was identified by the licensee).

Three items of noncompliance were identified in the inspection report. These items regarded: (1) failure to identify Subsection NF of the ASME Code as the applicable requirement for the reactor vessel anchor bolts; (2) failure to establish measures to assure that purchased material conforms to the procurement documents; and (3) failure to establish measures to assure that heat treating and nondestructive tests were controlled in accordance with applicable codes and specifications. Licensee commitments in regards to corrective actions included: (1) a commitment to conduct a review to confirm that safety related low alloy steel bolting and/or component support materials, which have been tempered and quenched and are 7/8" or greater in diameter, have been procured in accordance with proper codes and standards; (2) a commitment to obtain NRR approval of the acceptability of the Unit 2 reactor vessel anchor bolts and (3) a commitment that actual plant modifications to compensate for the defective bolts would not be started on Unit 1 until approval of the design concept was received from NRR.

The stud failure mechanism was identified as stress corrosion cracking which propagated to the point that the studs failed by cleavage fracture. Tests indicated that some studs utilized in Unit 2, although of different material and heat treatment, have above specification surface hardness readings.

The final report per 50.55(e) requirements was submitted by the licensee on December 1, 1981.

NRR has the lead responsibility for evaluation and approval of the licensee's proposals for resolution of this matter.

9. A special inspection was conducted in December, 1980 at the Bechtel Power Company Ann Arbor, Michigan offices to verify implementation of the specific commitments and action items reflected in Consumers Power Company response to 10 CFR 50.54(f) questions (regarding excessive settlement of the Diesel Generator Building foundations). The results of this inspection were documented in Inspection Report Nos. 50-329/80-32 and 50-330/80-33. Two items of noncompliance were identified regarding: (1) failure to provide adequate corrective actions with regard to identified audit results; and (2) inadequate design control. Licensee corrective actions included: (1) revision of procedures; (2) revision of specification; and (3) audit of FSAR sections. The licensee actions were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/81-12, 50-330/81-12, 50-329/81-19 and 50-330/81-19.

Additional information regarding this matter is discussed in the 1981 section of this report, Paragraph K.6.

K. 1981

Twenty-three inspection reports were issued in 1981 of which one pertained to a management meeting and twenty-two to onsite inspections. A total of twenty-one items of noncompliance were identified during 1981. One significant construction problem was identified involving deficiencies in piping suspension system installations (see Paragraph 4). These items/problems are described below:

1. Two items of noncompliance were identified in Inspection Report Nos. 50-329/81-04 and 50-330/81-04. These items regarded: (1) failure to account for all tools and materials used in a controlled clean room area; and (2) inadequate procedure for the installation of the Unit 2 vent valves in the core support assembly. Licensee corrective actions included: (1) the upgrading of personnel and equipment logs; (2) the addition of new logs; (3) issuance of a formal Stop Work Order for further work on the installation of vent valves; (4) the revision of installation procedures; (6) training and indoctrination of personnel performing vent valve installations; and (5) the revision of the overview inspection plan. The licensee's actions in regards to these items were reviewed and it was determined that action had been taken to correct the identified noncompliances and to prevent recurrence. This determination is documented in Inspection Report Nos. 50-329/81-04 and 50-330/81-04.

2. One item of noncompliance was identified in Inspection Report Nos. 50-329/81-08 and 50-330/81-08 regarding the failure to provide adequate storage conditions for Class 1E equipment. Licensee corrective actions included: (1) additional training for Bechtel maintenance engineers; (2) an audit of maintenance activities; and (3) reinspections of affected equipment. The licensee's actions in regards to this matter were subsequently reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/81-23 and 50-330/81-23.

3. Four items of noncompliance were identified in Inspection Report Nos. 50-329/81-11 and 50-330/81-11. These items regarded: (1) inadequate procedures for the temporary support of cables and for the routing of cables into equipment; (2) failure of QC inspectors to identify inadequate cable separation; (3) inadequate control of nonconforming raceway installations; and (4) failure to translate the FSAR requirements into instrumentation specifications. Licensee corrective actions in regards to (1) and (2) above, included: (1) the revision of cable pulling procedures;

(2) the repair of damaged cables; (3) training given to the termination personnel and the involved QC inspector; and (4) the revision of the cable termination procedure. The licensee's actions in regards to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/81-20, 50-330/81-20, 50-329/82-03 and 50-330/82-03. Licensee commitments in regards to corrective actions pertaining to items (3) and (4), above, included: (1) the addition of required barriers on pertinent raceway drawings; (2) the revision of Project Quality Control Instruction; (3) and the revision of the instrumentation specification. The licensee's actions in regards to these items will be reviewed during subsequent NRC inspections.

4. Eight items of noncompliance were identified during a special indepth team inspection to examine the implementation status and effectiveness of the Quality Assurance Program. The results of the inspection are documented in Inspection Report Nos. 50-329/81-12 and 50-330/81-12. Three of the items of noncompliance regarded: (1) failure to take adequate corrective action concerning the trend analysis procedure; (2) failure of QC inspections to identify a nonconforming cable bend radius; and (3) failure to take adequate corrective action in regards to the lack of rework procedures. Licensee corrective actions in regards to items (1) and (2) above, included: (1) the issuance of a new procedure for trending; (2) the revision of cable termination procedures; and (3) additional training given to the responsible QC inspector. The licensee's actions in regards to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/82-02, 50-330/82-02, 50-329/82-03 and 50-330/82-03. The licensee's commitments in regards to corrective actions pertaining to item (3) above, included: (1) the development of Administrative Guidelines and Instructions for rework; and (2) the revision of field procedures. The licensee's actions in regards to this item will be reviewed during subsequent NRC inspections.

The remaining five items of noncompliance identified in Inspection Report Nos. 50-329/81-12 and 50-330/81-12 are considered to be a significant construction problem. Safety related pipe support and restraint installations and QC inspection deficiencies in regard to those installations were identified. The five items of noncompliance pertaining to this issue regarded: (1) failure to install large bore pipe restraints, supports and anchors in accordance with design drawings and specifications; (2) failure of QC inspectors to reject large bore pipe restraints, supports and anchors that were not installed in accordance with design drawings and specifications; (3) failure to prepare,

review and approve small bore pipe and piping suspension system designs performed onsite in accordance with design control procedures; (4) failure to adequately control documents used in site small bore piping design activities; and (5) failure of audits to include a detailed review of system stress analysis and to follow up on previously identified hanger calculation problems. Licensee corrective actions in regards to items (3) through (5) included: (1) the review and upgrading of small bore piping calculations (2) audits of small bore piping activities; (3) revision of Engineering Directive; (4) additional training in QA procedures; and (5) audits of document control. The licensee's actions in regards to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/82-07 and 50-330/82-07.

As a result of the adverse findings, an Immediate Action Letter (IAL) was issued by the NRC on May 22, 1981 acknowledging the NRC's understanding that the licensee would not issue fabrication and construction drawings for the installation of the safety related small bore pipe and piping suspension systems until requirements identified in the IAL had been completed and audited.

The IAL requirements were subsequently reviewed and determined to have been satisfactorily addressed. This is documented in Inspection Report Nos. 50-329/81-14 and 50-330/81-14.

The licensee's actions in regards to noncompliance items (1) and (2) above, are discussed in Paragraph 1 of the following report section for 1982(L).

5. One item of noncompliance was identified in Inspection Report Nos. 50-329/81-14 and 50-330/81-14 concerning inadequate design controls involving the Bechtel Resident Engineer's review of the field engineers redline drawings for small bore piping. Licensee corrective actions included: (1) a 100% review of all questionable systems; and (2) the revision of a Project Instruction. The licensee's actions in regards to this matter were subsequently reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/82-07 and 50-330/82-07.

6. In January, 1981 an inspection was conducted by the NRC to verify whether adequate corrective actions had been implemented as described in the Consumers Power Company response to Questions 1 and 23 of 10 CFR 50.54(f) submittals (regarding excessive settlement of the Diesel Generator Building foundation). The findings during this inspection, which include three items of noncompliance and one deviation, are documented in Inspection Report Nos. 50-329/81-01 and

50-330/81-01. The items of noncompliance and the deviation regarded: (1) failure to develop test procedures for soils work activities; (2) failure to have soils laboratory records under complete document control; (3) failure to have explicit instructions for the onsite Geotechnical Engineer's review of test results; and (4) failure to have a qualified Geotechnical Engineer onsite. Licensee corrective actions included: (1) revision of Quality Control Procedures and Specification; (2) development of new Quality Control Procedures; and (3) the addition of a qualified Geotechnical Engineer. The licensee's actions in regards to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/81-12 and 50-330/81-12.

7. In March 1981, an inspection was initiated by the NRC to verify the licensee's Quality Assurance Program for the ongoing soil borings. The soil borings were performed by the licensee in response to a request from the Corps of Engineers for additional soil information for their review of the licensee's 10 CFR 50.54(f) answers. The findings of this inspection, which includes one item of noncompliance, are documented in Inspection Report Nos. 50-329/81-09 and 50-330/81-09. The noncompliance regards the lack of evaluation of Woodward-Clyde technical capabilities prior to the commencement of drilling operations. Licensee commitments in regards to corrective actions included: (1) the review, for compliance, of Midland Project major procurements and contracts; and (2) the review and revision of pertinent procedures. The licensee's corrective actions in regards to these items will be reviewed during subsequent NRC inspections.

L. 1982

Fourteen inspection reports have been issued during 1982 covering the period through June 30, 1982 of which two pertain to management meetings, one to an investigation, one to the SALP meeting, and ten to onsite inspections. During this period of time seven items of noncompliance were identified. One significant construction problem was identified involving electrical cable misinstallations (see Paragraph 2). These items/problems are discussed below:

1. The licensee conducted reinspections to determine the seriousness of the safety related support and restraint installation and QC inspection deficiencies identified in Inspection Report Nos. 50-329/81-12 and 50-330/81-12. The results of the reinspections are documented in Inspection Report Nos. 50-329/82-07 and 50-330/82-07. From a sample size of 123 safety related supports and restraints installed and inspected by Quality Control, approximately 45% were identified by the licensee as rejectable.

On August 30, 1982, the licensee was informed of the NRC's position that the licensee shall reinspect all the supports and restraints installed prior to 1981 and perform sample reinspections of the components installed after 1981. The licensee has agreed to perform the reinspections.

2. One significant construction problem was identified during 1982. It involved electrical cable misinstallations. Details are as follows:

   During the special team inspection conducted in May 1981, 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 Midland Project Quality Assurance Department (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 NCRs. 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 Nos. 50-329/82-06 and 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 reinspection program for those cables installed after March 15, 1982. The licensee has agreed to perform the reinspections.

3. Three examples of noncompliance to one 10 CFR 50 Appendix B Criterion were identified in Inspection Report Nos. 50-329/82-03 and 50-330/82-03. These examples regarded: (1) failure to follow procedures concerning drawing changes; (2) inadequate specification resulting in the undermining of BWST No. 2 valve pit; and (3) inadequate control of changes to procedures. The licensee's response to the identified item of noncompliance is presently under review. Corrective actions taken by the licensee in regards to this item will be reviewed during future inspections.

4. Four examples of noncompliance to one 10 CFR 50 Appendix B Criterion and a deviation were identified in Inspection Report Nos. 50-329/82-05 and 50-330/82-05. The examples of noncompliance and the deviation regarded: (1) failure to review and approve a Mergentine (the soils contractor) field procedure prior to initiation of work; (2) inadequate control of specification changes; (3) inadequate acceptance

criteria for dewatering specification; (4) inadequate instruction to prepare or implement reinspection plans; and (5) inadequately qualified remedial soils staff. The corrective actions taken by the licensee in regards to this item will be reviewed during future inspections.

5. One item of noncompliance was identified in Inspection Report Nos. 50-329/82-06 and 50-330/82-06 concerning the licensee's failure to establish a QA program to provide controls over the installation of remedial soils instrumentation. This item resulted in the issuance of a letter by the licensee on March 31, 1982 confirming the licensee's suspension of all underpinning instrumentation installation activities until: (1) approved, controlled drawings and procedures or instructions were developed to prescribe underpinning instrumentation installation activities; (2) plans were established to inspect and audit instrumentation installation activities; and (3) Region III had concurred that (1) and (2), above, were acceptable.

   A followup inspection by Region III in April 1982 identified that the licensee had developed acceptable drawings, procedures, and instructions for underpinning instrumentation installations such that instrumentation installation activities could be resumed. An additional followup inspection on August 23, 1982 determined that the installation of underpinning instrumentation for the Auxiliary Building was complete and acceptable. This item will remain open pending the licensee's development of drawings, procedures, and instructions for the future installation of underpinning instrumentation for the Service Water Building.

6. One item of noncompliance and a deviation were identified in Inspection Report Nos. 50-329/82-11 and 50-330/82-11. The items regarded: (1) inadequate anchor bolt installation; and (2) the use of unapproved installation/coordination forms during remedial soils instrumentation installations. The licensee's responses to the identified items of noncompliance are presently under review. Corrective actions taken by the licensee in regards to these items will be reviewed during future inspections.

The ASLB issued an order modifying Construction Permits No. CPPR-81 and No. CPPR-82, dated April 30, 1982. This order suspended all remedial soils activities on "Q" soils for which the licensee did not have prior explicit approval. The ASLB issued another order, dated May 7, 1982 clarifying the April 30, 1982 order. This order only included those activities bounded by the limits identified on Drawing C-45.

As a result of past Region III findings, the Region III Administrator created a special Midland Section staffed with individuals assigned solely to the Midland project. Since the formation of the Midland Section a work authorization procedure has been developed by Region III and the licensee to control work and ensure compliance to the ASLB Order.

Remedial Soils activities performed by the licensee thus far in 1982 involve: (1) the drilling of a number of wells which function as part of the temporary and permanent dewatering systems; (2) the installation of the freeze wall associated with the Auxiliary Building Underpinning activity; (3) the completion of the initial work on the access shaft; and (4) the completion of the Auxiliary Building instrumentation for remedial soils activities.

Midland Daily News

April 30, 1985

ATTACHMENT #3

Zack welders laid off again

4-30-85

By JAMES ISELER
Daily News staff writer

For the second time in five months, Consumers Power Co. has laid off Midland nuclear plant workers after the U.S. Nuclear Regulatory Commission questioned safety-related welding procedures.

Sixty Zack Co. welders were laid off two weeks ago because procedures for welding heating, ventilating and air conditioning (HVAC) ducts failed to meet NRC requirements, NRC inspector Ronald Cook said.

The layoffs come on the heels of another Zack layoff late last year when 151 welders were taken off their jobs because of concerns about their qualifications.

"The procedures for welding have not been requalified to the satisfaction of the NRC to allow them to go back to safety-related work," Cook said Thursday during a hearing before a federal licensing panel.

A spokesman for Consumers, which is building the plant, said Friday the second round of layoffs was made necessary by the lack of work.

"We don't have the work to be done until the procedures are qualified by MPQAD (the Midland Project Quality Assurance Department), and approved by the NRC," plant spokesman Norman Saari said Friday.

THE 60 WELDERS laid off recently are among the 151 taken off their jobs Nov. 30. They were rehired, then put "on the shelf" again when the new procedures did not pass the NRC, Saari said.

Although Consumers' MPQAD qualified the new procedures, Cook said he found them deficient after testing them in only one area. Consumers then decided to rework the procedures, Cook said Thursday.

That test took place about a month ago, he said.

Saari said there are 19 seperate safety-related welding procedures for HVAC systems, 13 of which are to be submitted to MPQAD next week. MPQAD is a department within the utility designed to oversee construction quality at the site.

WELDERS ALSO must be certified under the new procedures, Saari said. He could not estimate how long it would take for all the procedures and welders to be certified.

When all the welders and procedures are approved, Saari said, there will be about 160 Zack welders at the plant. Currently, 11 welders are working on non-safety areas. Both safety- and non-safety-related areas deal with HVAC, Saari said.

"That's the only area Zack is subcontracted to perform," he said.

Portions of the HVAC system area are safety-related because they are designed to provide a habitable atmosphere for control room workers during a radiation release accident.

TWO DAYS AFTER the Zack layoff last year, Consumers laid off more than 1,000 Bechtol Power Corp. workers and halted all safety-related work being performed by that firm. The utility then ordered a reinspection of Bechtel's safety-related work.

The reinspection stemmed from problems found by the NRC in the plant's diesel generator building, including evidence that its current state does not match construction drawings.

The Bechtel safety-related work has not resumed, Saari said. However, work to shore up buildings that have cracked and settled excessively after being built on poorly-compacted soil is ongoing.

Midland Nuke

Midland Daily News, Midland, Michigan
Thursday, December 2, 1982
Page 3

151 nuclear plant welders laid off

By PAUL RAU
Daily News staff writer

One hundred and fifty-one welders employed by the Zack Co. have been laid off at the Midland nuclear plant due to concerns about their qualifications and the welding procedures they were using, according to a federal official.

The layoffs mean all welding on safety-related heating, ventilating and air conditioning (HVAC) ducts at the nuclear plant has been halted until the U.S. Nuclear Regulatory Commission determines the welders and their procedures meet federal standards for nuclear plant work.

Wayne Shafer, chief of the Midland Section of the NRC's Office of Special Cases, predicted the welders won't be allowed to resume work on safety-related ducts until mid-December.

The Office of Special Cases is a special inspection team set up by the NRC this summer to look at construction problems at only two nuclear plants — Midland and Zimmer, in Ohio.

Shafer said the HVAC problems were revealed by a September audit by the Midland Project Quality Assurance Department (MPQAD) of Photon Testing Inc. Photon Testing is a subcontractor responsible for training Zack welders, certifying that they are qualified and are writing weld procedures for HVAC work.

The audit recommended that Photon Testing be removed as an approved contractor at the Midland plant because the firm was not implementing portions of a QA program and was implementing other portions improperly, Shafer said.

Shafer said the audit findings also reflect poorly on Consumers Power Co., Bechtel Power Corp. and Zack because those firms let contracts to Photon Testing which did not require it to invoke all of the government's QA standards.

QA is a system of overinspection designed to verify that nuclear plants are built according to federal specifications.

QA problems have plagued the Midland project for years, mystifying the NRC and leading it to focus intense scrutiny on the plant. The special Midland Section inspection team headed by Shafer is an example. Plant owner Consumers Power also has reorganized its MPQAD several times to make it more effective in finding and preventing construction problems.

IN ADDITION to the layoffs and the welding halt, Shafer said the qualification of new welders by Photon has been discontinued and all safety-relted weld procedures have been withdrawn. These actions taken by Consumers Power and Bechtel became effective at 3 a.m. Tuesday, he said.

Consumers Power spokesman Norman Saari said three actions will now be taken — development of new welding procedures, recertification of Zack welders and evaluation of their past work.

The NRC has not yet determined the seriousness of the HVAC situation, or whether the corrective actions were appropriate. "If it is determined that the welding was unsuccessful, it obviously will have to be repaired or removed and replaced," Shafer said.

Saari said there is "no reason to believe the work is bad," but said Consumers has decided the problems are potentially reportable as construction or paperwork deficiencies. The utility is to report back to the NRC in 30 days with more information.

PORTIONS OF THE HVAC system are safety-related because, among other functions, they are designed to provide a habitable atmosphere for control room operators during a radiation release accident.

Proper functioning of the Midland HVAC system is more critical than at some other nuclear plants, according to the NRC, because it also must protect operators from a possible chemical release at Dow Chemical Co., located just across the Tittabawassee River from the nuclear plant.

Saari said welding is continuing on some HVAC systems which are not safety-related, such as those in the plant's turbine building.

Daily News

Friday, July 23, 1982, Midland, Michigan

25c Per Copy

Fired Zack workers claim coverup in quality control

By PAUL RAU
Daily News staff writer

Four former employees of the Zack Corp. have charged that the nuclear plant vendor attempted to cover up a widespread breakdown in documentation for safety-related components supplied to three nuclear plants, among them the Midland nuclear plant.

The four, who went public with their allegations on a Chicago television station Thursday night, claim they were fired from their jobs in Zack's Quality Assurance (QA) documentation section after they reported the breakdown to Consumers Power Co. officials at the Midland plant.

Documents indicate Consumers became aware of the QA breakdown in an October 1981 report from Zack, but decided against reporting the problems to the U.S. Nuclear Regulatory Commission.

The NRC, which became aware of the problems at Zack in May of this year, took no action until this week after being prodded by an official for the Government Accountability Project (GAP), which has offered legal representation to the four former Zack employees.

The NRC began an investigation Thursday at the LaSalle nuclear plant in Illinois to see if ductwork supplied by Zack meets federal codes, and the agency said the probe may spread to the Midland plant.

THE FOUR persons, all of them new to the nuclear field, were hired by Zack arming October 1981 to clean up, as one of the four put it, a "horrendous mess" of documents at Zack's headquarters in Chicago. Specifically, they said they were to create a filing system and to group purchase orders with certifications showing that the materials sold by Zack to the three utilities were suitable for use in nuclear plants.

What they found, two of the four said, was that many documents were missing and that thousands more had been altered, retyped, whited-out or otherwise falsified by other Zack employees before the QA documentation section was created to deal with the problem.

Shortly after the persons reported the problems to Consumers through the Midland Project Quality Assurance Department (MPQAD), the entire four-person documentation team was dismissed by Zack on April 23.

The official reason was "departmental reorganization," but the four claim they were fired in reprisal for attempting to correct Zack's massive paperwork problems. At least one of them, the father of 16 children who is now out of work, said he is considering filing suit against Zack.

The four are Albert T. (Terry) Howard, Sharon Morell a, Mark Clusen and Charine Grant. All live in the Chicago area and were featured in a special report broadcast Thursday night by Channel 5, an affiliate of NBC. The report, broadcast only in the Chicago area, is to be part of tonight's programming at the station, and the report may be picked up by NBC for nationwide use.

The information in this article was compiled from a notarized affidavit sworn to by one of the four employees, Daily News telephone interviews with that person and some of the others in the group and a variety of documents that apparently passed between Zack, Consumers, Bechtel Power Corp. and vendors that supplied materials to Zack. Copies of the latter documents were obtained by the four whistleblowers and given to the Daily News by GAP.

GAP, which protects and represents persons who blow the whistle on fraud and abuses, said it cautioned the four that going public with their allegations could jeopardize their careers, but GAP said they decided to speak out due to the magnitude of the problems they found at Zack.

HOWARD, 43, the father of 16, said in his affidavit, "It is intolerable to my conscience as a father, a citizen and an employee to let problems of this magnitude go unexposed."

He said that because some materials ordered by Zack did not meet federal specifications, the installation of ductwork in the three nuclear plants may have "critical implications for the health and safety of residents in the surrounding three communities." Those are Midland, Seneca, Ill. in the case of LaSalle and Clinton, Ill., for the Clinton nuclear plant.

"I am committed to exposing the full extent of this fiasco until these nuclear plants are entirely rechecked and certified as safe by trustworthy, independent third parties," he said.

Shortly after the QA documentation section was formed, Howard was installed as its supervisor. He said that at best, the activities of his group were a "paperwork shuffle" to ward the NRC from revealing the "horrible extent" of Zack's documents ion breakdown. At the worst, he said the falsified documents may represent a criminal coverup by Zack.

Submitting falsified documents to a federal agency, such as the NRC, is a violation of federal law. Neither the NRC nor any other law enforcement or regulatory agency has charged that such violations were committed by Zack.

In 1981, a plan for code invoking Zack was nearly sent to the U.S. Department of Justice for criminal prosecution. NRC officials said then that paperwork violations had been committed, but that the case was not strong enough to warrant the Justice Department's attention.

Howard said in his sworn statement, which is to be sent to the NRC, "It is a fact that the history of the Zack Corp. in nuclear contracting is full of mistakes, bunglings and felonious misstatements related to material traceability, material certification, vendor certification, qualification of quality control personnel and most importantly, the purchase and setup of hardware used in the construction of nuclear facilities."

HOWARD SAID the first step in the Zack "coverup" began in-house before the QA documentation section was formed, and in addition to other alterations included forged "stickers" applied to material certifications.

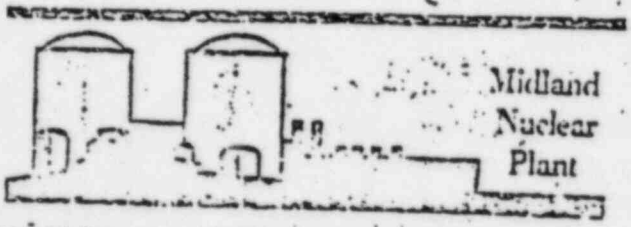
In a telephone interview, Howard refused to name the Zack personnel who did the forging and alterations other than to say the persons are in "upper management." He said, "We know who it is, but we did not find it necessary to put a finger on them. The Justice Department will take care of that."

The next step in the coverup, Howard said, was an effort to correct altered or missing documents by sending letters to various vendors asking them to certify that materials they supplied to Zack were suitable for safety-grade nuclear plant systems.

Some vendors never answered. One which did said Zack had not ordered safety-grade components in the first place.

In a letter dated Sept. 21, 1981, U.S. Steel Supply, a division of the U.S. Steel Corp., gave this reply to Zack: "These orders were not called in to our salesperson as 'Safety Related.' Therefore, they were handled in our normal procedure and not run through our V&T (verification and testing) program ... Please advise as what is meant by the term 'Safety Related' and what obligation if any does this impose on the supplier."

The letter indicated U.S. Steel Supply had sent Zack 36 orders of materials between December 1980 and May 1981.



DOCUMENTS SHOW that on Oct. 22, 1981, Zack notified Consumers that the paperwork problems were potentially reportable to the NRC under part 50.55(e) of the Code of Federal Regulations. The report began, "There has been a breakdown of the quality assurance program" for document control.

Federal regulations require that utilities building nuclear power plants report any significant deviations from federal codes to the NRC.

Zack said in the report that "unauthorized personnel" had gained access to the documents and made "improper falsifications." Zack said in the report, "These errors and

Continued on page 3

Attachment #4

TO ALL PLANT ASSURANCE DIVISION PERSONNEL

FROM HPLeonard

DATE June 9, 1983

SUBJECT MIDLAND ENERGY CENTER - ORGANIZATIONAL REALIGNMENT
FILE: 1.1 SERIAL: 12702

Consumers Power Company

INTERNAL CORRESPONDENCE

CC (see distribution list)

The purpose of this memo is to announce the realignment of functions and resources within what is currently the HVAC QA and BOP QA areas. Effective June 13, 1983, the HVAC QA and BOP QA areas collectively become the Plant Assurance Division (PAD) of the Midland Project Quality Assurance Department (MPQAD). The PAD consists of three major elements: the HVAC Assurance (HVACA) Subdivision, the Plant Assurance Programs (PAP) Subdivision and the Plant Assurance Engineering (PAE) Section. The basic PAD organization is shown in Attachment 1 to this memo.

HVAC Assurance Subdivision

The HVAC Assurance Subdivision is organized as shown in Attachment 2 to this memo. John L (Chip) Wood is appointed Assistant Superintendent, HVAC Assurance Subdivision, and reports to me.

Michael J (Mike) Schaeffer is appointed Section Head, HVAC Assurance Engineering and Verification Section, and reports to Chip Wood. William F (Bill) Heiberger continues as Supervisor, HVAC Assurance Engineering Group and reports to Mike Schaeffer. James S (Jim) Gallivan continues as Supervisor, HVAC Verification Group, and reports to Mike Schaeffer.

The HVAC "IE & TV" Section is renamed the HVAC Inspection Section. James L (Jim) Zimmerman continues as Section Head and reports to Chip Wood. Ronald W (Ron) Miller, Frederick J (Fred) Lounds and David S (Dave) Haas continue as HVAC Inspection Group Supervisors and report to Jim Zimmerman.

Sondra K (Sandy) Cox continues as Supervisor, HVAC Administration Group and reports to Chip Wood.

Plant Assurance Programs Subdivision

The Plant Assurance Programs Subdivision is organized as shown in Attachment 3 to this memo. David A (Dave) Taggart is appointed Assistant Superintendent, Plant Assurance Programs Subdivision, and reports to me.

T K Subramanian continues as Section Head, Turnover and Test Assurance Section, and reports to Dave Taggart. John Yatchuk continues as Supervisor, Test Assurance Group and reports to T K Subramanian. Alan R (Al) Gort continues as Supervisor, Turnover Assurance Group, and reports to T K Subramanian.

Kermit J Gill continues as Supervisor, Technical Services Group and reports to Dave Taggart.

Brien M Palmer continues as Supervisor, Verification Programs Management Group, and reports to Dave Taggart. The Verification Programs Management Group is responsible for management of the Quality Verification Program, the Hanger Reinspection Program and completion of the Cable Reinspection Program.

Lee R Howell is appointed Supervisor, Inspection Evaluation Group, and reports to Dave Taggart. The Inspection Evaluation Group will implement a new program to continuously measure the performance of the inspection system (planning, training, inspection). This program will replace the present "overinspection" program. Lee's initial assignment is to recommend an implementation plan and resource requirements. The final structure and staffing of this function will be based on Lee's recommendations. Edward L (Ed) Jones and Donald A (Don) Nott will assume staff assignments temporarily to assist Lee.

Plant Assurance Engineering Section

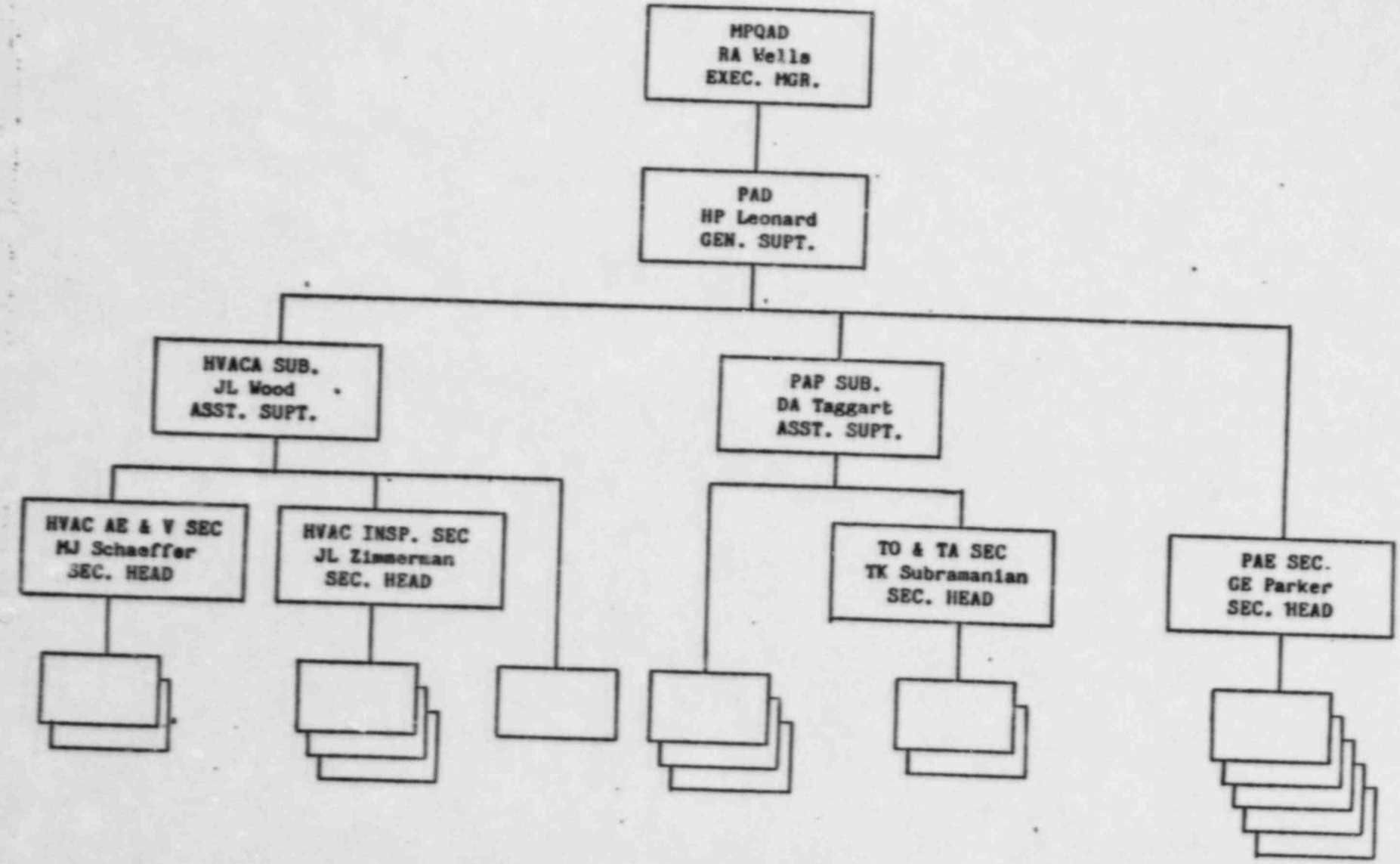
The Plant Assurance Engineering Section is formed and assumes the functions now performed by the "QAE" and "IE & TV" groups within BOP-QA. When the new Inspection Evaluation Program becomes effective, the PAE Section will no longer conduct overinspections. The PAE Section is comprised of five discipline oriented Assurance Engineering Groups as shown in Attachment 4 to this memo.

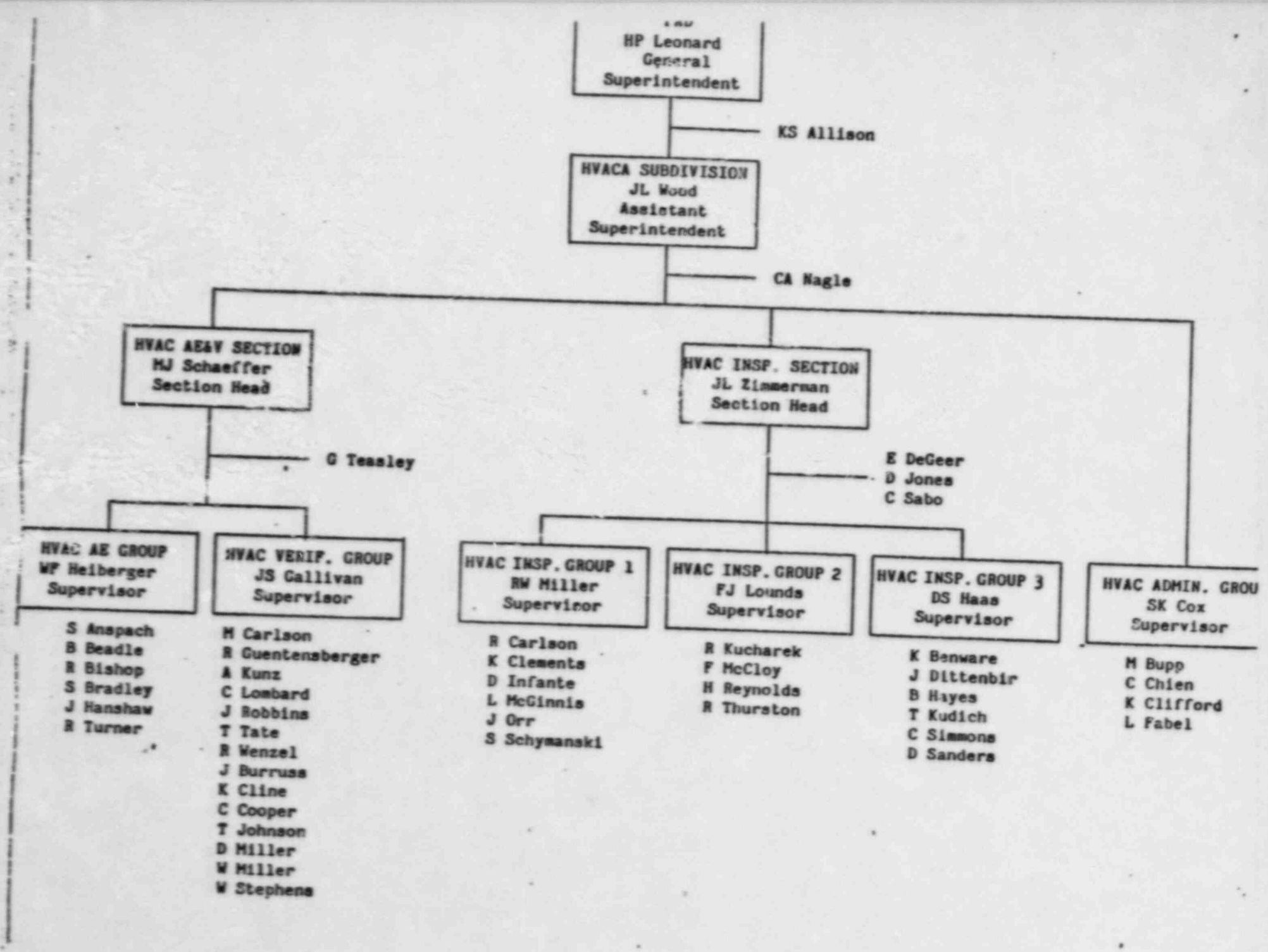
Geoffrey E (Jeff) Parker is appointed Section Head, Plant Assurance Engineering Section, and reports to me. Robert D (Bob) Davis continues as Supervisor, Welding and NDE Assurance Engineering Group. James A (Jim) Pastor is appointed Supervisor, Instrumentation and Control Assurance Engineering Group. Harry J Perrine continues as Acting Supervisor, Electrical Assurance Engineering Group. Henry P Nunes is designated as Acting Supervisor, Civil Assurance Engineering Group. Robert F (Bob) Williams is designated Acting Supervisor, Mechanical Assurance Engineering Group. Bob Davis, Jim Pastor, Harry Perrine, Henry Nunes and Bob Williams report to Jeff Parker.

By copy of this memo Gary Ewert is requested to revise procedures, rosters and organizational charts to reflect the above.

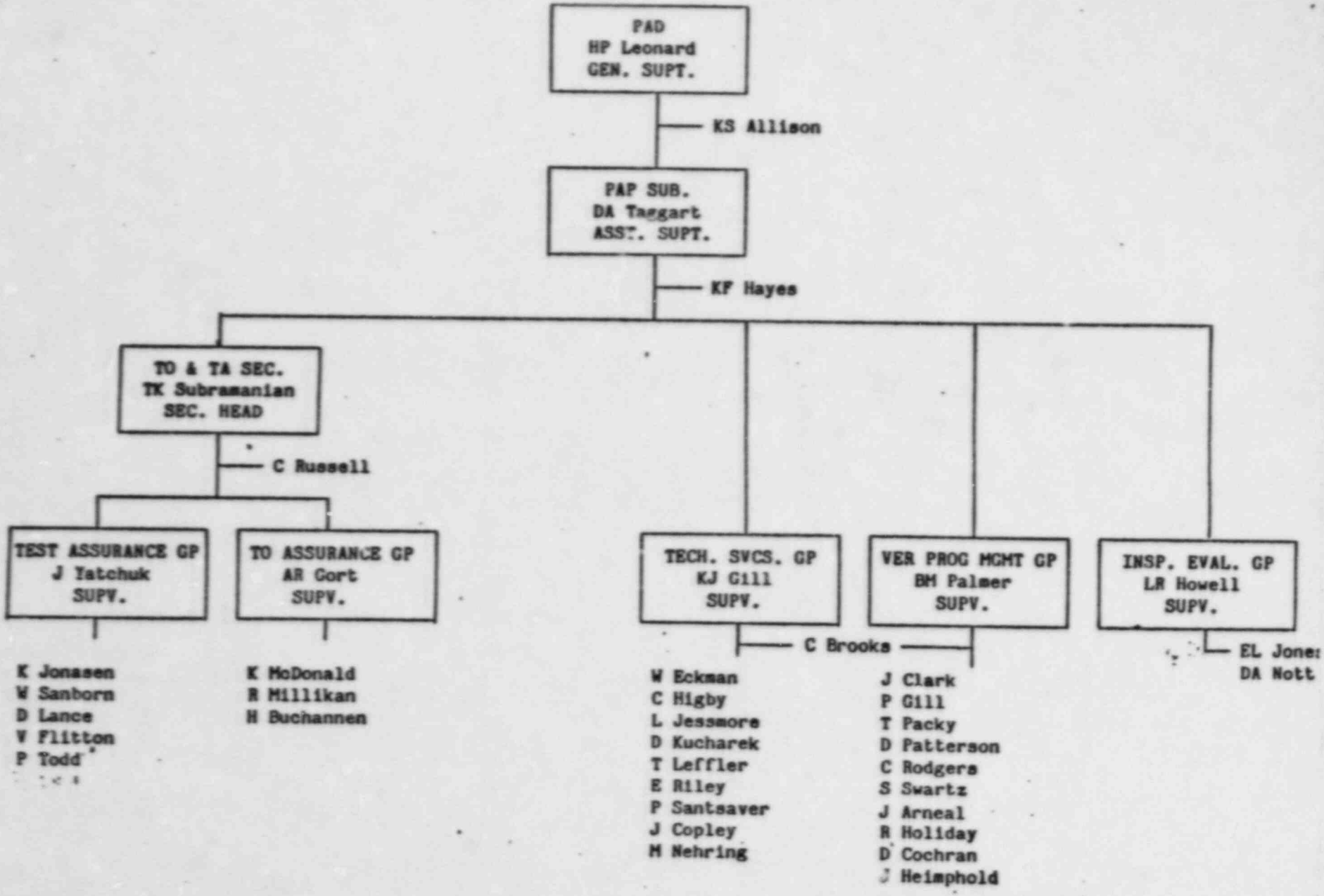
HPL/ksa

Attachment No. 1

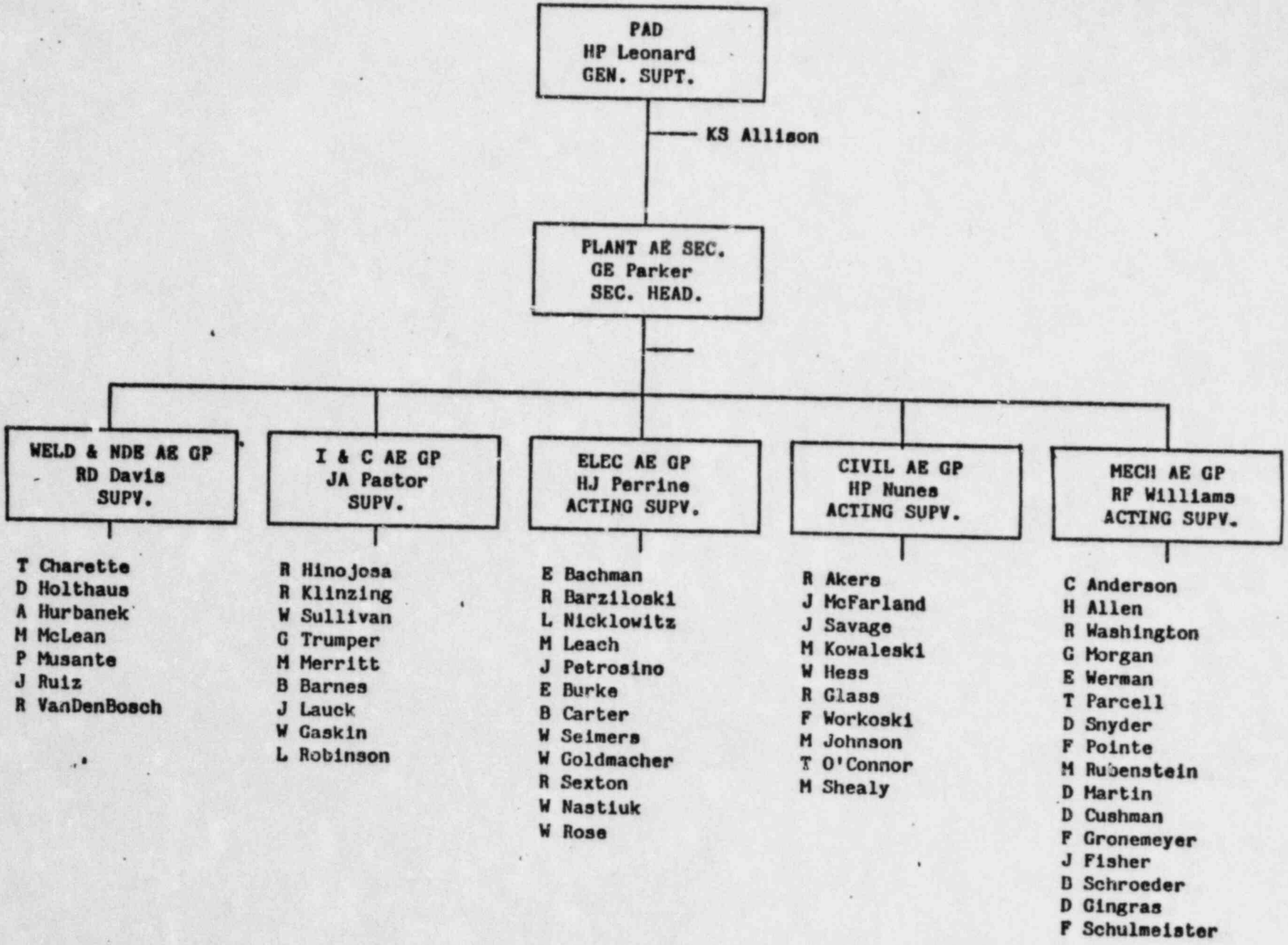



HP Leonard
General
Superintendent
KS Allison
HVACA SUBDIVISION
JL Wood
Assistant
Superintendent
CA Nagle
HVAC AE&V SECTION
MJ Schaeffer
Section Head
G Teasley
HVAC AE GROUP
MF Heiberger
Supervisor
S Anspach
B Beadle
R Bishop
S Bradley
J Hanshaw
R Turner
HVAC VERIF. GROUP
JS Gallivan
Supervisor
M Carlson
R Guentensberger
A Kunz
C Lombard
J Robbins
T Tate
R Wenzel
J Burruss
K Cline
C Cooper
T Johnson
D Miller
W Miller
W Stephens
HVAC INSP. SECTION
JL Zimmerman
Section Head
E DeGeer
D Jones
C Sabo
HVAC INSP. GROUP 1
RW Miller
Supervisor
R Carlson
K Clements
D Infante
L McGinnis
J Orr
S Schymanski
HVAC INSP. GROUP 2
FJ Lounds
Supervisor
R Kucharek
F McCloy
H Reynolds
R Thurston
HVAC INSP. GROUP 3
DS Haas
Supervisor
K Benware
J Dittenbir
B Hayes
T Kudich
C Simmons
D Sanders
HVAC ADMIN. GROU
SK Cox
Supervisor
M Bupp
C Chien
K Clifford
L Fabel

Attachment No. 3



Attachment No. 4



Attachment #5

MIDLAND INDEPENDENT DESIGN AND CONSTRUCTION VERIFICA
OPEN, CONFIRMED AND RESOLVED (OCR) ITEM REPORT

TYPE OF REPORT: OPEN _____ CONFIRMED X
RESOLVED _____ ITEM

FILE NO. 3201-008
DOC NO. 3201-008-C-031
REV. NO. 0

DATES REPORTED TO: LTR 3/3/83 SRT _____ PROJECT TEAM/PROJECT MGR. 3/3/83
PRINCIPAL-IN-CHARGE 3/7/83 CPC/DESIGN ORG. _____

STRUCTURE(S), SYSTEM(S), OR COMPONENT(S) INVOLVED:
AFW System Pipe Supports

IDCV PROGRAM AREA OR TASK (IF APPLICABLE):
Topic I.3.1c - Pipe Supports
Verification of Physical Configuration

DESCRIPTION OF CONCERN:
Refer to OCR's C-32 thru 35, same program area as above, for description of four hangers field measured by TERA to be out of installation tolerance limits.

SIGNIFICANCE OF CONCERN:
The construction deviation control process is not functional.

RECOMMENDATION X OR RESOLUTION _____:
1. Review further the construction deviation control process to determine extent of breakdown.
2. Process per Project Quality Assurance Plan.

COMMENTS BY SRT (IF REQUIRED):

REFERENCES (INCL. RELATED OCR ITEM REPORT NO.):
Dwg 7220-H-639 SH 14 (Q), Rev 11
Spec 7220-M-326 (Q) Rev 8 "Install., Inspect. & Doc. of Pipe Supports"

SIGNATURE(S):

CS	CS	HAL	JWB	N/A JWB
OCR ITEM REPORT ORIGINATOR	LTR	PROJECT MANAGER FOR PROJECT TEAM	PRINCIPAL-IN-CHARGE	SRT (IF REQUIRED)
3/3/83	3/3/83	3/4/83	3/14/83	
DATE	DATE	DATE	DATE	DATE

Attachment #6

Meeting between NRC and Consumers Power Company
(2/8/83)

Opening Remarks

Good morning ladies and gentlemen. We are meeting here today to review Consumers Power Company's planned Construction Completion Program for the Midland Nuclear facility. This meeting is being held in front of the public because of the overall public interest that has been shown in the Midland project in general and identified quality assurance and construction problems in particular and is consistent with our established practice of holding meetings of this type permitting public attendance. While we welcome attendance by members of the public and the news media, I wish to emphasize that this is a meeting between Consumers Power Company and NRC, and involves public participation only through observation. Following this meeting the NRC will be glad to hear comments or respond to questions from the public concerning the subject matter of the meeting or other areas of interest concerning the Midland project and further opportunity for discussion by the public will occur tonight for those persons who could not attend this meeting. In addition to the two public meetings, a few of the NRC people and myself will be meeting this afternoon with senior representatives of Consumers Power Company and Bechtel corporation at the Midland construction site. This meeting is being held at their request to discuss the perceived importance of some of the specific problems identified by the NRC inspections last fall and to discuss Region III's handling of certain inspection findings relative to the approaches used by other NRC regions. That meeting will not get into the details of this morning's meeting.

I'd like to start by having the NRC people who are present here today to introduce themselves and then ask Consumers Power and their representatives to introduce themselves.

By way of background, for benefit of the public, Mr. Eisenhut and myself met with Mr. Selby and Mr. Cook of Consumers Power Company on two occasions in early September of last year to discuss renewed NRC concerns regarding the effectiveness of the quality assurance program at Midland. These meetings were an outgrowth of a detailed review and evaluation by members of my staff, attempting to assess the reasons why the quality assurance program was not effective in the early identification, correction and prevention of problems. Consumers Power Company was told that we believed their QA program was basically sound, but that the implementation of that program resulted in a number of problems. While we were unable to pinpoint the specific reasons for these implementation problems, we did share with Consumers Power management certain practices we believed warranted change. Furthermore, we told them that comprehensive programs needed to be developed and put into place in order to: (1) Provide assurance that completed construction work was sound, and (2) Provide assurance that future work would be effectively controlled. We requested CPCo to develop a program to deal with NRC's concerns and to sumbit that program for review by the staff.

with the remedial soils work and one dealing

On September 17, 1982, CPCo submitted two letters to the NRC --- one dealing with the remainder of the safety related work. A supplemental submittal was made on October 6, 1982. Two meetings, both open to the public, were subsequently held in Washington between NRC and CPCo to discuss these submittals. Concurrent with this review effort, my staff conducted an in-depth inspection of the civil, mechanical, and electrical work associated with the diesel generator building. This inspection effort identified a number of substantive quality assurance problems and led Consumers Power Company to conduct similar inspections of other plant areas. Those inspections by CPCo disclosed similar QA problems. These combined inspection findings, in conjunction with CPCo's overall assessment of the status of the project, resulted in CPCo's halting a large amount of safety related work at the Midland site and to develop a formalized Construction Completion Program for completing the Midland Project. We subsequently requested CPCo to tie together this program with their earlier submittals regarding proposed quality improvements into a single package. We also committed to have a public meeting to obtain the comments of concerned citizens and organizations once that program had been submitted to the NRC. This program was submitted by CPCo on January 10, 1983, and serves as the focal point for the meetings today.

With that status, I would now like to turn over the meeting to Mr. Selby.

Hundreds at nuclear plant session

Federal nuclear officials wanted comments on the Midland nuclear plant from Midland area residents Tuesday night, and they got an earful.

It was a night when the motives of citizen intervenors and the credibility of Consumers Power Co. both were questioned, along with the motives of the U.S. Nuclear Regulatory Commission for holding the public meeting in such a small room.

A crowd that might have contained up to 400 persons overflowed Conference Room E at the Quality Inn, where utility and regulatory officials had gathered to field questions. The room is designed to hold 225 persons, and perhaps 150 or more spent two and a half hours standing outside three doorways and listening.

Applause was showered nearly equally on those expressing pro- and anti-nuclear sentiments, with the crowd perhaps favoring persons who said they want the plant to open.

But even Mary Sinclair, well-known in Midland for opposition to the plant, left the podium to cheers when she concluded her statement saying she hopes the growing awareness of the nuclear plant in the Midland community continues.

SISTER ARDETH PLATTE, representing the Saginaw City Council, led off the night by asking who will guarantee the nuclear plant's safety, and whether planned third-party audits of the plant's construction quality will be truly independent.

Darrell Eisenhut, director of the NRC's Division of Licensing, said no one can guarantee the plant's safety. "All we can do is assure there is a sufficiently low risk from the plant. That responsibility principally lies with the utility," he said.

Eisenhut said the NRC's precautions to make sure workers conducting the quality audits are not connected to Consumers include prohibitions on stock ownership and a requirement to sign certificates stating they or their families have not and do not work for the utility.

Sister Ardeth told him the $120,000 fine levied on Consumers Power Tuesday by the NRC is a "slap on the wrist in comparison with what happens if the plant is not constructed safely."

Thomas Herron, chairman of the anti-nuclear Lone Tree Council, said he's lost confidence in the NRC and that "even the most avidly pro-nuke zealots are embarrassed" by the condition of the Midland plant.

In answer to Herron's question, Consumers Power vice president James W. Cook said that in no case has any fine levied on the utility been passed on to ratepayers.

The fine isn't much punishment because Consumers Power is such a large utility, said NRC Region III Administrator James G. Keppler. But he claimed the "public embarrassment" caused by such fines acts as a deterrent.

THEN COMPLAINTS began about the crowded room. One man said an emergency evacuation would create a disaster because the room's three exits all were blocked, and another compared the NRC's lack of action on the complaint to the agency's regulatory performance.

That man also claimed the NRC was trying to discourage public participation in the meeting by choosing a small room.

Keppler apologized for the overcrowding, and said the NRC did not expect the large turnout.

THOMAS DEVINE, legal director of the Government Accountability Project (GAP), a Washington-based group investigating the nuclear project, read and then gave the NRC an affidavit in which plant worker Richard Letherer claimed that the NRC colludes with Bechtel Power Corp. by revealing the time and subject of supposedly unannounced inspections.

A number of NRC officials denied that allegation, but promised to check into it.

PRO-NUCLEAR viewpoints then emerged, with one man saying that the nuclear industry's problems are not insurmountable and that Consumers Power is "definitely on the right track" in correcting problems at the Midland plant.

The pro-nuclear position was perhaps best expressed by Midland resident Tracy Parsons, who said in a reference to GAP that "Midland seems to be suffering from an infusion of outside interest groups operating under the pretense of being watch-dog groups."

Parsons added, "GAP does not represent the view of Midland. I believe nuclear plants can be built and operated safely."

John Catenacci, a Dow Chemical Co. engineer, claimed that no one inside Dow "believes in" Consumers Power any longer. He said he doesn't know if that feeling is deserved, but stressed that assurances of the plant's quality must be provided by third-party, independent reviews of the plant.

"I really don't think you're going to get any more credibility out of this community" without such proof of the plant's proper construction, he added.

Mrs. Sinclair countered claims that her intervention in the licensing process has delayed the nuclear project, saying delays associated with the soil hearing and the recent halt of safety-related work are the utility's own doing.

GAP official Billie Garde denied that the group is trying to shut the Midland plant. She blamed the project's troubles on work supervisors, and said the bottom line is that "Consumers has not been able to implement their plans, no matter how well they work."

Keppler closed the meeting by noting the large attendance and said the NRC will "seriously consider" conducting another evening meeting.

CONSUMER'S COOK was asked after the meeting to respond to the comments that his company now lacks credibility among Midlanders.

"We'll have to let our actions and activities in completing the plant speak for themselves," Cook said.

Later, he said he worries that the public may not be getting a complete understanding of the many complex issues associated with the plant.

"It clearly evident there is a considerable amount of confusion in the public mind, based on the number of extremely complex technical, procedural and political currents in the discussions going on in public.

"We have been unable to articulate clearly what's going on out here. I believe we've contributed to the confusion," Cook added. He pledged to renew the utility's efforts to communicate with the public and media.

By PAUL RAU

Attachment #7

QA problem still puzzles Keppler

Related story, page 2

By PAUL RAU
Daily News staff writer

A special inspection team of the U.S. Nuclear Regulatory Commission still does not know why Consumers Power Co. has trouble making its own Quality Assurance program work at the Midland nuclear power plant, NRC regional administrator James Keppler testified here Monday.

Keppler, who formed the special NRC team, said, "I simply know their (Consumers') quality assurance program has not worked the way it should."

A lawyer said Consumers is unable to find and fix its own problems, and that the NRC doesn't have the muscle to force the correct building of the Midland plant.

Lynne Bernabei, who represents citizen intervenor Barbara Stamiris, made those comments after her day-long questioning of Keppler, NRC Region III administrator, during the Midland plant's licensing hearing.

Keppler testified, however, that the NRC does have enough "manpower" to make sure the Midland plant is built properly, even though his top inspectors have testified they have too much work to do in too little time and that they may not be finding all the plant's problems.

While Keppler said that past quality assurance breakdowns at the Midland plant have proved that "I'd be a fool to blindly trust" Consumers alone to finish building the plant and correcting its foundation problems, he said he is confident that independent, third-party reviews of the plant's quality will assure its safe operation.

"The NRC is seeing to it that an extensive program will be put in place to verify the quality of the plant before an operating license is issued," he said.

"If those activities are carried out properly, there should not be a health and safety concern," he added.

MS. BERNABEI TOLD reporters after Monday's hearing that she proved that Consumers lacks the character and competence to build and operate the Midland plant.

"It was obvious (from testimony) that all of the action Consumers has taken to respond to QA problems at the site has been due to the shoving and the insistence of the NRC. It has not been done on Consumers' own initiative," she Bernabei said.

She said the inability of Consumers to bring its QA programs up to the NRC's expectations "demonstrates poor management attitude. Consumers Power is unable to recognize its own problems and reform itself."

Keppler lent credence to that statement, both in testimony and statements to the Daily News. He began saying publicly last summer that he is mystified why quality assurance is poor at the Midland plant, and Monday he said he still hasn't found the answer.

Keppler told the Daily News that the NRC is hard to please, but that other utilities in Region III — which includes 15 nuclear units under construction in eight states — have done a "more credible job" of meeting QA regulations. None are completely acceptable, he said, but Midland still ranks on the "low end of the scale."

HERE ARE EXERPTS from Keppler's testimony:

- He shares his inspectors' distrust of Consumers in the sense he doesn't have confidence in the utility.
- The utility "simply has not instilled the message of doing the job right the first time rather than trying to inspect quality into the job."
- The managements of both Consumers and Bechtel Power Corp., the prime contractor, are "ineffective" in assuring attention to detail.
- Keppler agreed with Ms. Bernabei that Consumers is performing more poorly than before because in the past, the utility has been able to identify its problems. The late-1982 inspection of the plant's diesel generator building showed problems are continuing.

The NRC inspected the diesel building because most of the work in it is very recent. So many problems were found that the NRC urged Consumers to take action. On Dec. 2, the utility laid off more than 1,000 manual workers, halted most safety-related construction and began reinspecting the work.

THE CONSTRUCTION COMPLETION Plan for the Midland plant, unveiled this January by Consumers, also was criticized by Ms. Bernabei. The plan calls for the layoffs, reinspection program, rehiring and completion of the plant, and also a series of third-party audits to assure quality construction.

She said the plan "has never been proposed to the public as anything but an initiative of Consumers', and that's simply not true."

The NRC force-fed the "get-well" plan to Consumers under the threat of a virtual work halt if quality doesn't improve, she said.

Work to improve the plant's foundation was allowed by the NRC, Ms. Bernabei said, even though the inspection of the diesel generator building showed QA deficiencies with soil work.

And the NRC partly based its approval for a portion of the foundation work on advice and reports from an engineering firm (Stone & Webster) performing an oversight role, even though the NRC had not at that time approved the choice of the firm for that role, she said.

She said part of the quality verification effort will depend on "Consumers' willingness and ability to identify problems" and noted that Keppler's inspectors "have testified they have no confidence in Consumers' ability to do that."

Midland Note

Attachment #8

NRC inspector urges n-plant housecleaning

6-2-83

By JAMES ISELER
Daily News staff writer

Six Midland nuclear plant engineers, including two top-level managers, should be replaced because they are unqualified or have attitude problems, a federal inspector said Wednesday.

U.S. Nuclear Regulatory Commission inspector Ross Landsman told a federal licensing panel that "the site would run a lot easier without them there."

Among the men Landsman named were Roy A. Wells, executive manager of the Midland Project Quality Assurance Department; James Meisenheimer, superintendent of MPQAD soils work; and Dick Oliver, section head for soils work quality assurance.

Landsman also named James A. Mooney, executive manager of soils work; John Schaub, assistant project manager for soils work; and John Fisher, underpinning contracts manager. Except for Fisher, who works for Bechtel Power Corp., the men are employees of Consumers Power Co. which owns the plant.

"You've gotta have somebody responsible for what the people under them do," said Landsman, a member of the Midland Section of the NRC's Office of Special Cases.

Four other NRC officials said they did not think anyone should be replaced, although one said he was "concerned" with the attitudes of some managers.

Former Midland Section head Wayne D. Shafer said inspectors have suggested replacing certain Consumers employees, but the section has taken no formal action.

"None of us have gone to our management and said 'Get rid of X, Y, and Z,'" Shafer said.

However, Shafer said there has been an "argumentative" attitude from some Consumers managers in the past that extends up to James Cook, vice president for the Midland project.

THE PANEL was answering a question from Atomic Safety and Licensing Board Chairman Charles Bechoefer, who said later that he asked the questions to help "pinpoint why some of the work isn't as good as it should be."

Consumers attorney Michael Miller said he was "uncomfortable" that the men were named on the record.

"After all, these are men's careers we're talking about," Miller said.

Citizen intervenor Barbara Stamiris then stated that "we're talking about people's lives with this nuclear plant."

Consumers spokesman Norman Saari said that since the charges were made in a hearing, "any additional discussion from us will come up in the hearing room, not in the public or in the media."

Landsman's testimony came during the first day of the latest round of hearings to determine if work to fix soil problems at the plant is being done adequately.

The hearings will continue through next week at the Quality Inn, 1815 South Saginaw. They are open to the public.

THREE OF the men Landsman named work for MPQAD, which oversees quality assurance at the plant. Quality assurance is a series of checks and inspections to insure the plant is built according to NRC requirements.

Although the MPQAD workers' resumes indicate they may be "technically" qualified to perform their jobs, Landsman said they did not have enough experience actually administering QA.

The NRC's senior resident inspector, Ronald Cook, said he thought Wells was qualified to direct MPQAD "as long as he's surrounded by people with more experience."

The three men named from the soils area should be replaced because of "misunderstandings" between themselves and the NRC inspectors, Landsman said.

Although he could not name any specific examples, Landsman said he has been told by Consumers engineers that a job was performed one way then would find out later they "did a 180-degree turn."

Concern over "cost and schedule is the common thread with all these misunderstandings," Landsman said. "Quality is taking a back seat all the time."

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE--PNO- [illegible] Date: [illegible]

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

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

Licensee Emergency Classification:
_____ Notification of Unusual Event
_____ Alert
_____ Site Area Emergency
_____ General Emergency
__xx__ Not Applicable

Subject: INADEQUATE QUALITY ASSURANCE FOR HVAC WELDER CERTIFICATION AND PROCEDURE QUALIFICATION

All safety-related welding on the heating, ventilating and air conditioning (HVAC) was stopped November 30, 1972, after it was determined by the licensee that the quality assurance program for welder certification and procedure qualification was inadequate.

A licensee QA audit of Photon Testing, Inc., which performed testing of weld samples used in certifying welders and welding procedures, determined that the contractor did not have an adequate quality assurance program. Photon Testing has subsequently been removed by the licensee from the list of approved Midland vendors.

As a result of the audit findings, the HVAC contractor, Zack Company, has discontinued all welding on safety-related HVAC systems, laying off 151 crafts workers. Zack also discontinued the certification of new welders and withdrew all safety-related weld procedures.

The Photon Testing has performed testing services for HVAC welder and procedure qualifications since 1980.

Region III (Chicago) personnel are on site and will monitor the licensee's program to address the qualification of the Zack welders and procedures and to assess the quality of the completed HVAC welding work.

There has been local news media interest in the quality assurance problems and resulting layoffs. Region III will continue to respond to news inquiries.

The State of Michigan will be notified.

The licensee reported the quality assurance inadequacies and HVAC worker layoffs as a potential 50.55e construction deficiency to Region III personnel at the site at 2 p.m., (EST), December 1, 1982. This information is current as of that time.

Contact: R. Gardner 384-2524 | W. Shafer 384-2656 | R. Warnick 384-2599

DISTRIBUTION:

H. St._____	MNBB_____	Phillips_____	E/W_____	Willste_____
Chairman Palladino	EDO	NRR	IE	NMSS
Comm. Gilinsky	PA		OIA	RES
Comm. Ahearne	MPA		AEOD	
Comm. Roberts	ELD	Air Rights_____		MAIL:
Comm. Asselstine		SP	INPO_____	ADM:DMB
SECY			NSAC_____	DOT: Trans Only
ACRS	Applicable Resident Site _____			
CA				
PDR	Regions I_____, II_____, IV_____, V_____		Licensee (Corporate Office)_____	

8212060112

Rev. 11/19/82

Attachment A

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

(K-1)

June 21, 1982

MEMORANDUM FOR: James G. Keppler, Regional Administrator

FROM: C. E. Norelius, Director, Division of Engineering and Technical Programs
R. L. Spessard, Director, Division of Project and Resident Programs

SUBJECT: SUGGESTED CHANGES FOR THE MIDLAND PROJECT

Historically, the Midland Project has had periods of questionable quality assurance as related to construction activities and has had commensurate regulatory attention in the form of special inspections, special meetings, and orders. These problems have been given higher public visibility than most other construction sites in Region III. As questions arise regarding the adequacy of construction or the assurance of adequate construction, we are faced with determining what regulatory action we should take. We are again faced with such a situation.

Current Problem

The current problem was caused by a major breakdown in the adequacy of soils work during the late 1970's. Because of the increased regulatory attention given the site, we expect that exceptional attention would be given to this activity and that licensee performance would be better than other sites or areas which have not had such significant problems and therefore have not attracted this level of regulatory attention. However, that does not appear to be the case and Midland seems to continually have more than its share of regulatory problems. The following are some of the specific items which are troublesome to the staff.

Technical Issues

1. In the remedial soils area, the licensee has conducted safety related activities in an inadequate manner in several instances - removal of dirt around safety related structures, pulling of electrical cable, drilling into safety related utilities.

MDS 11/9/82
7D

5pp

8303210282

2. In the electrical area, in trying to resolve a problem of the adequacy of selected QC inspectors' work conducted in 1980, the licensee completed only part of the reinspection even when problems were identified, and appears inclined to accept that 5% of electrical cables may be misrouted (their characterization of "misrouting" may imply greater significance than we would attach to similar findings).

3. In the pipe support area, in trying to resolve a problem of the adequacy of QC inspections conducted in 1980, the licensee has portrayed only a small percentage of defects of "characteristics" identified and has not addressed the findings in terms of a large percentage of snubbers which may be defective because of the characteristics within each snubber that may be defective (e.g., if only one characteristic was defective out of 50 reviewed on a single hanger, the percentage is small; but if the one defective characteristic makes the hanger defective the result would have a much greater significance level). The licensee had done a detailed statistical analysis in an attempt to show that the small percentage of characteristics were found rather than broadly approaching the problem with significant reinspections to determine whether or not construction was adequate.

Communications

Multiple misunderstandings, meetings, discussions, and communications seem to result in dealing with the Midland Project. Some examples are:

1. NRC staff attending a meeting in Washington on March 10, 1982, heard the Consumers Power Company staff say that electrical cable pulling related to soils remedial work was completed. It was determined to be ongoing the next day at the site.

2. When Region III attempted to issue a Confirmatory Action Letter, J. Cook informed W. Little of his understanding that both J. Keppler and H. Denton had agreed that the subject of the CAL was not a safety related item subject to NRC regulatory jurisdiction. Such agreements had not in fact occurred and following a meeting, Consumers Power Company issued their commitments in a letter to Region III.

3. In reviewing a licensee May 10, 1982 letter, responding to the Board Order, the NRR staff had an unsigned letter and Region III had a signed copy both dated the same date but differing in content.

4. Recently a Region III inspector in closing out and exiting from his inspection described the exit meeting as being the most hostile he had ever participated in.

5. The responses to any Region III enforcement letters issued to Midland are more lengthy and more argumentative than are any other responses from any other licensee in Region III. This point was made in the SALP response provided by Midland, and the SALP response in itself from Midland is an example of the type of response which we commonly receive from the site. The length of the response is at least as long as the initial SALP report.

6. Multiple requests for briefing meetings and other statements by the utility to the effect that we should review procedures in developmental stages imply that Midland wants the NRC to be a part of their construction program rather than having us perform our normal regulatory function.

Staff Observations

1. With regard to corrective actions of identified noncompliances, the Midland response seems to lean towards doing a partial job and then writing up a detailed study to explain why what they have done is sufficient rather than doing a more complete job and assuring 100% corrective action has occurred. In the detailed writeups that are prepared, it is the staff's view that the licensee does not always represent the significance properly, and the analyses and studies often raise more questions than they solve; thus time appears to have been wasted in writing an analysis rather than in fixing the problem.

2. Midland site appears to be overly conscious with regard to whether or not something is an item of noncompliance and spends a lot of effort on defending whether or not something should be noncompliance as opposed to focussing on the issue being identified and taking corrective action. This appears in part to be due to their sensitivity of what appears in the public record as official items of noncompliance. This sensitivity may have resulted from the extended public visibility which has attended construction of the facility. The staff's view is that the Midland site would look better from the public standpoint and be more defendable from NRC's standpoint, if they concentrated on fixing identified problems rather than arguing as to the validity of citations. This type of view was expressed by the utility during a recent effort to clarify in detail that certain construction items on the soils remedial work should not be subject to NRC's regulatory action.

3. The Midland project is one of the most complex and complicated ever undertaken within Region III. The reason is that they are building two units of the site simultaneously and additionally have an underpinning construction effort which in itself is probably the equivalent of building a third reactor site. The massive construction effort and the various stages of construction activity which are involved make the site extremely complicated to manage. This activity appears to cause a lot of pressure on the licensee management.

4. Mr. J. Cook, the Vice President responsible for the Midland site is an extremely capable and dynamic individual. However, these characteristics in conjunction with the complexity and immenseness of operation as set forth in 3, above, may actually be contributing to some of the confusion which seems to exist. The staff views that (1) he is too much involved in detail of plant operations and there are times when the working level staff appears to agree and be ready to take action where Mr. Cook may argue details as to the necessity for such action or may argue as to the specific meaning of detailed work procedures, (2) this kind of push may lead to such things as letters both signed and unsigned appearing in NRR and causing confusion, (3) this push may lead to some animosity at the licensee's staff level if NRC activities are looked on as slowing progress of construction at the site.

Recommendations

It appears essential that some action be taken by NRC to improve the regulatory performance of the Midland facility. The following specific suggestions are made.

1. The company must be made aware and have emphasized to them again that their focus should be on correcting identified problems in a complete and timely manner.

2. We should question whether or not it is possible to adequately manage a construction program which is as complex and diverse as that which currently exists at Midland. We would suggest specifically that the following activities be considered:

   a. That the licensee cut back work and dedicate their efforts to getting one of the units on line in conjunction with doing the soils remedial work.

   b. That they have a separate management group all the way to a possible new Vice President level, one of which would manage the construction of the reactor to get it operational and the second to look solely after the remedial soils and underpinning activities.

3. Consumers Power Company should develop a design and construction verification program by an independent contractor. This would provide an important additional measure of credibility to the design and construction adequacy of the Midland facility.

We would be happy to discuss this with you.

C. E. Norelius, Director
Division of Engineering and
Technical Programs

R. L. Spessard, Director
Division of Project and
Resident Programs

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

Attachment B
(K-2)

July 23, 1982

MEMORANDUM FOR: R. F. Warnick, Director, Enforcement and Investigations Staff

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

SUBJECT: INDICATORS OF QUESTIONABLE LICENSEE PERFORMANCE - MIDLAND SITE

As per our conversation of July 21, 1982, the following is a list of those items that various inspectors consider to be indicative of questionable licensee performance:

1. One of the leading items is the over-inspection performed on electrical QC inspectors which was done in response to NRC concerns identified in the May 1981 team inspection. The licensee found weaknesses in the inspections performed by some electrical QC inspectors pertaining to not identifying the mis-routing of cables. This item culminated in an item of noncompliance. The licensee did not expand the overview activity to a degree necessary for an acceptable resolution to the identified weakness - even after a meeting in RIII. This item has not been resolved to the satisfaction of the NRC although our position has been clearly defined.

   As a partial response to the team inspection concern, the licensee presented the NRC with an audit report which would demonstrate a response to our concern of questionable electrical QC inspections. However, the audit report stated that it (the audit report) did not address the NRC concerns.

2. During the dialogue for the underpinning and remedial soils work, a large amount of emphasis has been placed on the settling data for the structures involved. During a meeting in HQ on March 10, 1982, the need for QC requirements on remedial soils instrumentation were explicitly delineated. However, one week later, the NRC inspectors found soils work instrumentation installation was started the day after the March 10, 1982 meeting without a QC/QA umbrella; that the licensee's QA Auditor and QA Engineering personnel were not approached pertaining to the need for QA coverage for this soils settlement instrumentation; that there were strong indications that the licensee had mislead the NRC in relating that the work was essentially complete when indeed it was not; and presently, the licensee management informs our inspector that items are ready for his review when in actuality they are not. Our conversations with licensee personnel - other than management - confirm that the items are not ready for review.

NOS 11/4/82

8303210288

8pp.

3. Historically, one of the NRC questions has been, "Who is running the job - Bechtel or Consumers?" The following example would allow one to believe it is Bechtel: As a part of the resolution to our findings in the soils settlement instrumentation installation, the NRC insisted that the licensee generate a Coordination/Installation Form to cover interface between different evolutions of instrumentation installation. The licensee would call our inspector for his concurrance on the adequacy of the form - the inspector would approve Consumers Power Company's form, but then would find out that Bechtel did not want to work to Consumer's form - the form that was generated to resolve regulatory concerns. This event has occurred twice and was considered as a deviation during a more recent inspection. The opinion of the staff is that if Consumers generates a form that will aid them in not incurring regulatory difficulty, and which has had NRC input, the licensee should demand that the contractor comply with these policies instead of the contractor dictating the regulatory environment under which they will work.

4. Deficiencies in material storage conditions has continually been a concern to the NRC and has resulted in items of noncompliance. To the inspectors, the ability to maintain quality storage is indicative of how rigorous or slipshod the constructor's attitude is towards construction. The licensee has attempted to entice the constructor to do better in maintaining the material storage conditions, but still the licensee's auditors and the NRC have negative findings in material storage conditions and negative discussions with the contractor about the validity of the finding.

5. At periodic intervals, the support of cables, particularly in the control room area, which are awaiting further routing or termination, has met with the disapproval of the NRC inspectors. These discrepancies also include cables without covered ends being on the floor in walk areas that are in a partially installed status. This is also another indicator of slipshod workmanship which has been brought to the constructor's attention at various times, but was last noted during a recent inspection.

6 In the area of instrumentation impulse line installation and marking, the licensee has had separability violations which has required removal of all installed impulse lines. Also, the NRC, because of this and significant adverse operational conditions, insisted that the installed impulse lines be identified. Although the licensee plans to mark the impulse lines, there was an inordinate amount of resistance to marking the lines - even though there had been instances of mis-matched channels because of identification confusion.

7. An example of reluctance in placing the responsibility for quality workmanship at the foreman and/or worker level has recently been identified. The NRC inspectors noted that some drop-in anchors were improperly installed and obviously did not adhere to the installation procedures. The licensee's attitude indicated this was not a valid finding because QC had not inspected the item. The NRC inspectors treat this as indicative that slipshod workmanship is tolerated in the hopes that QC will find the mistakes.

8. Late in 1981, the licensee decided to move the QA Site Superintendent into another position and cover this site function by sharing the site time between the QA Director and the QA Manager. After a January 1982 meeting with the NRC at RIII, the licensee opted to fill the QA Superintendent spot with another person. In the spring of the year, the NRC inspectors were following up on welding allegations and approached the QA Superintendent. The QA Superintendent was familiar with the alleged poor welding and had established what the NRC inspectors determined to be a responsive plan to resolve the questionable QC welding inspections. At the Exit Interview, the QA Director did not appear to back the QA Site Superintendent's proposed plan which had tacit NRC approval. The NRC inspector classified in writing and with just cause that the Exit Interview was the most hostile exit interview he had ever encountered.

9. During a recent inspection, it was noted by the NRC inspector that fill dirt was piled and being covered with a mud mat at a nominal 1:1½ horizontal to vertical slope when the specification called for a 1½:1 horizontal to vertical slope. A constructor Field Engineer witnessed the wrong slope being installed and justified and defended the slope after being informed of the specification requirement. This is another example of the constructor having an attitude which precludes quality workmanship.

10. At different times, NRC inspectors have experienced difficulty in getting information which is controlled by the contractor, such as supporting calculations and qualifying information to justify a given installation. A recent example is: the NRC inspector informed the licensee and the contractor he wanted to see resumes of persons involved in the remedial soils work. There is an obligation to the NRC to supply a precise number of "qualified" persons on the soils work. The inspector was informed he could not get these records as they were personal. The inspector ultimately did get the information after bringing it to the attention of licensee upper management. However, this indicates an implied unwillingness of the constructor to share information with the NRC and sometimes with the licensee.

11. The licensee oftentimes does not demonstrate a "heads up" approach to their activities. The following are examples of the licensee operating in an environment using tunnel vision - "blinders".

a) During a recent NRC inspection, the inspector challenged the ability to maintain the proper mix ratio on high pressure grout. This was done after the inspector noted that the operator could never maintain the proper mix ratio without continual manual control - which was not available when the grout is applied. The licensee's apathetic attitude did not allow them to stop the grout application until the next day when this became an issue at the exit interview.

b) At one point in time, the company doing drilling on site for the remedial soils work cut into a safety related duct bank between the diesel generator building and the service water building. The Consumers Power Site Manager's Office (the production people) stopped work because - from a quality standpoint conditions were so deplorable. However, the Site Manager's Office did not have responsibility in this area - the Midland Project QA Department had this responsibility and did not invoke their authority to prevent the drilling work from getting out of control - or to bring it back into control.

c) The NRC inspector recently witnessed the licensee setting up to drill a well hole in safety related dirt using a technique which was not authorized. If the inspector had not brought this to the licensee's attention, the licensee would have violated an Order addressing remedial soils work and also the Construction Permit. When the licensee was queried as to the availability of the QC/QA personnel who would prevent such activity from happening, the NRC inspector was informed that this was (another) misunderstanding.

The NRC inspectors have been informed by our contacts on site that there are memos written to the effect that "peripheral vision" should be curtailed and communication with the NRC stifled. The NRC has not read these memos yet - but plans to in the near future, provided they really exist and infer what we have been informed.

12. The licensee seems to possess the unique ability to search all factions of the NRC until they have found one that is sympathetic to their point of view - irregardless of the impact on plant integrity. Some examples of this are:

a) The NRC soils inspector informs the licensee that soils stabilization grout comes under the Q program. The licensee is not particularly happy with this position. Unknown to the inspector, the licensee argues his point with NRR to have the grout non-Q - using only those arguments which support his (the licensee's) position. The licensee

has the advantage of the NRC inspector's technical and regulatory basis for supporting his (the inspector's) position, and therefore avoids mention of this during the discussions with NRR. However, the licensee's QA program, which has already been approved by NRR, states that all the remedial soils work is Q unless RIII approves a relaxation on a case by case basis. It appears the licensee does not wish to acknowledge the prior agreements with the NRC.

b) Since the failure of auxiliary feedwater headers in B&W steam generators, discussions have transpired between the NRC inspectors and the site personnel. These discussions have indicated that the licensee was maintaining a conservative approach and were entertaining the concerns expressed by the NRC which were stimulated primarily by gross mistakes in attempting the modification at operating B&W plants. The licensee's corporate personnel were annoyed that the NRC inspectors would not give approval to start the modification until all the preparatory work had been accomplished as this would tend to impact the schedule and the modification to the steam generators could become a scheduling nuisance. The licensee corporate personnel contacted the NRC inspectors involved to "reason with them". However, the corporate personnel, (including a representative from B&W) were unable to answer the concerns of the NRC inspectors but did mention that the NRR Operational Project Manager indicated that it was alright to proceed with the modification. The licensee corporate personnel could not state what the position of the NRR Construction Project Manager was on this issue - only that they had found some form of approval from someone in the NRC.

c) At times, when Immediate Action Letters or other forms of escalated enforcement become imminent, the licensee attempts to "appeal" their case with individuals in the regional management who are removed from the particulars of the tentative enforcement action. The licensee attempts to get these persons to agree to specific portions of the issue which would indicate that the licensee is "really not all that bad". However, the "real" issues, as identified by the NRC inspectors are being masked.

d) During inspections of the remedial soils work, the NRC inspector has been informed by the licensee that certain findings and areas of inspection were not within the purview of his (the inspector's) inspection program because they were in essence considered non-Q and that by virtue of prior agreement with the Regional Administrator were excluded from enforcement action. However, the NRC inspectors would subsequently find that there was no such agreement between the Regional Administrator and the licensee - only a philosophical discussion as to what, in general terms, constituted an item of noncompliance.

The above indicators support the reputation the licensee has for being argumentative. Their apparent inability to accept an NRC position without diligently searching to find a "softened" position results in numerous hours of frustrated conversations between all parties involved to resubstantiate (usually the original position) a position based on technical and regulatory prudency.

13. The licensee has been classified publicly by the NRC as being argumentative. The licensee continues to exhibit this trend, as evidenced by the following examples:

a) Essentially every item of noncompliance receives an argumentative answer which addresses only the specificity of the item of noncompliance and selectively avoids any concept which would support the essence for the item of noncompliance. For example - in the instance of the improperly installed drop-in anchor mentioned above, it was the fact that QC had not inspected the installation of the bolt which was important to the licensee. However, the real enforcement issue was that components were being improperly installed.

b) The Cycle II SALP made critical evaluations of the licensee's performance in several areas. The licensee's response to this SALP report was argumentative over specific details and did not seem to acknowledge that the consensus of opinion of the NRC inspection staff was that there were areas where the licensee's performance was weak. The licensee's argumentative position is in the form of "we really are not all that bad" when the records, findings and observations of the NRC inspectors support just the opposite position.

c) The "Q-ness" of the remedial soils work has continually been an argumentative topic of discussion which ultimately resulted in a HQ meeting on March 10, 1982. At this meeting, the "Q-ness" of the remedial soils work was specified and later documented with the meeting minutes. However, the licensee did not wish to abide by this position and a subsequent meeting was held in RIII to further clarify the NRC position. Still, the topic of "Q-ness" is being argued by the licensee, even though the ASLB has issued an Order further defining the "Q-ness" of the soils work. It might be noted that a hearing is in process over this soils issue and the NRC's position on "Q-ness" has been expressed during these testimonies.

14. During a recent episode, the licensee wanted to continue excavation of soils in proximity to the Feedwater Isolation Valve Pit (FIVP). However, the licensee wanted to perform this evolution without determining that the temporary supports of the FIVP were adequate. Making this determination would have an impact on scheduling, as stated by the licensee. The FIVP supports were installed without a Q umbrella and subsequent inspections did reveal several discrepancies in the installation of the support structure.

15. During the limited remedial soils work which has transpired, the licensee has managed to penetrate Q-electrical duct banks, a condens[illegible] header drain line, an abandoned sewer line, a non-Q electrical duct bank and a 72-inch circulating water line. All of these occurances have happened because of a lack of control and attention to details. Whenever approached by the NRC as to the adequacy of review prior to attempting to drill, the NRC receives responses which strongly suggest that the time was not taken to perform these reviews - perhaps taking this time would impact on the schedule.

16. By virtue of an earlier ALAB Order, the licensee is required to perform trend analyses for nonconforming conditions. These trend analyses have, in the past, masked the data such that obvious trends are not obvious and has resulted in negative findings by the NRC. This was addressed in one of the earlier SALP meetings. Recently, while performing a review of hanger welding data, the NRC inspector found that the statistical data had been diluted to the point that the number of unsatisfactory hangers could not be determined from the trend analyses or the type and degree of nonconforming conditions which were being identified pertinent to the hanger fabrication.

17. The licensee continually would use the NRC staff as consultants and classifies a regulatory and enforcement position as counter productive. This is reflected by the licensee not wishing to perform Q-work without obtaining NRC prior approval and then addressing only those areas where the NRC has voiced a regulatory concern - provided it is convenient to the licensee. This attitude has particularly prevailed in the remedial soils issue and to a lesser degree in the electrical installation areas. The preferred NRC inspector mode would be for the licensee to generate his program to establish quality and then the NRC would approve or disapprove. However, the licensee requires consultation with the NRC to establish his level of quality requirements.

The above is not intended to be a complete list of all discrepancies which indicate questionable licensee performance as this would require a more extensive review of the records and inspection personnel involved than time permits. Also, there has been no attempt to systematically document the enforcement and unresolved items list as these are contained in other information sources. However, the listing is rather comprehensive of the types of situations and attitudes which prevail at the Midland Site as observed by the NRC inspector staff.

When considering the above listing of questionable licensee performance attributes, the most damning concept is the fact that the NRC inspection effort at Midland has been purely reactive in nature for approximately the last year, and that these indicators are what have been observed in approximately the last six months. If

these are the types of items that have become an NRC nuisance under a reactive inspection program, one can only wonder at what would be disclosed under a rigorous routine inspection and audit program.

Sincerely,

R. J. Cook

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

cc: W. D. Shafer
D. C. Boyd
R. N. Gardner
R. B. Landsman
B. L. Burgess

Enclosure 3

Attachment C.
(K-8)

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

August 18, 1982

MEMORANDUM FOR: Region III Files

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

SUBJECT: MEETING BETWEEN NRR AND REGION III RE CONSUMERS POWER COMPANY PERFORMANCE AT MIDLAND (DN 50-329; 50-330)

On July 26, 1982, R. F. Warnick and James G. Keppler met with E. G. Case, D. G. Eisenhut, R. H. Vollmer, R. O. Tedesco, T. H. Novak, W. D. Paton, and J. Rutberg to discuss the performance of Consumers Power Company at the Midland site.

During the meeting reference was made to information contained in two memos from the RIII staff. The first memo dated June 21, 1982 is from C. E. Norelius and R. L. Spessard and concerns suggested changes for the Midland Project. The second memo dated July 23, 1982 is from R. J. Cook and concerns the licensee's performance at Midland. Copies of the memos are attached.

The meeting resulted in the following recommendations:

(1) Region III should obtain the results of the recent audit by NMC.

(2) Schedule a public meeting between NRC and CPC management in Midland, Michigan, to obtain licensee commitment to accomplish (3) and (4) below.

(3) The licensee should obtain an independent design review. (A vertical slice from design thru completion of construction.)

(4) The licensee should obtain an independent third party to continuously monitor the site QA implementation and provide periodic reports to the NRC. Region III is to provide a suggested outline for the continuous monitoring function.

Robert F Warnick

Robert F. Warnick, Acting Director
Office of Special Cases

Attachments: As stated

cc w/attachments: Meeting participants

POS 11/4/82
RB

8303210295

Attachment D
(K-4)

August 18, 1982

MEMORANDUM FOR: James G. Keppler, Regional Administrator

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

SUBJECT: CONSUMERS POWER-MIDLAND (DN 50-329; 50-330)

When you created the Office of Special Cases and a special Midland Section staffed ith individuals assigned solely to that project, you indicated your concern with the Midland Project. You did this in spite of the favorable findings of the special team inspection conducted in May, 1981, and the favorable testimony you gave before the Atomic Safety and Licensing Board on July 13, 1981. You indicated your concern was based on the Systematic Assessment of Licensee Performance (SALP) report for the period July 1, 1980 to June 30, 1981, the inspection findings since those dates, and the memo of June 21, 1982, by C. E. Norelius and R. L. Spessard suggesting certain changes be made at the Midland Project (copy attached as Enclosure 1).

At my request R. J. Cook prepared a summary of indicators of questionable license performance at Midland. A copy of Cook's memo dated July 23, 1982 is attached as Enclosure 2.

Because of your expressed concerns, you and I met with representatives from NRR on July 26, 1982 to discuss Midland and Consumers Power Company (CPCo) performance. That meeting also resulted in recommended actions. A summary of the meeting is attached as Enclosure 3.

Following the meeting with NRR, I discussed the recommendations of that meeting with our Senior Resident Inspector, other members of the new Midland Section, and former Section and Branch Chiefs who are intimately familiar with Midland.

Later that week (July 30) I spent a day at the Midland site. I attended the exit meeting following Landsman's and Gardner's inspection, met with CPCo and Bechtel management to get acquainted with them, and toured the plant site.

On July 31, 1982, I expressed my opposition to the recommendations we had come up with in the NRR meeting. My opposition was based on (1) opinions expressed by the Senior Resident Inspector, a Region III Branch Chief formerly responsible for the NRC inspection of Midland, and a Construction Section Chief who has been intimately associated with inspections of Midland regarding the proposed actions; (2) my visit to the site; and (3) the inability of Region III to articulate the problem(s) at Midland which the above referenced recommendations were supposed to solve. I indicated that we needed to better identify our concerns and the prescribe actions that would resolve these concerns.

OFFICE	RIII	RIII	RIII	RIII			
SURNAME	Keppler	Landsman	Shafer	Warnick			
DATE		RBK					

NRC FORM 318 (10-80) NRCM 0240 OFFICIAL RECORD COPY 0205 11/4/82

8303210301

On August 3, 1982, members of the Midland Section met with you to discuss my opposition to the recommendations coming from the meeting with NRR. The pros and cons of the recommendations together with other alternatives were discussed. The meeting concluded with you agreeing to give the Section until August 11 to determine a better proposed course of action to resolve NRC concerns about Midland.

To this end the Midland Section met together on August 4 and again on August 5 following our public meeting with CPCo on the SALP II report. Several alternatives were discussed including stopping all work on one unit, have an independent third party monitor all past and current construction work, stopping work in selected areas, performing a construction appraisal team inspection, placing all site QC work under CPCo, and establishing an augmented NRC inspection effort.

Although some members of the Midland Section thought that stronger actions should be taken, all members of the Section agreed they could support an augmented NRC inspection effort coupled with other actions to strengthen the licensee's QC/QA organization and management. These recommended actions are attached as Enclosure 4.

It is recommended the proposed actions to improve the licensee's performance be discussed with NRR and then the licensee.

Robert F. Warnick, Acting Director
Office of Special Cases

Attachments: As stated

OFFICE ▶							
SURNAME ▶							
DATE ▶							

NRC FORM 318 (10-80) NRCM 0240

OFFICIAL RECORD COPY

[redacted]
ATTACHMENT #2

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

FEB 2 4 1983

Docket No. 50-329
Docket No. 50-330

Consumers Power Company
ATTN: Mr. James W. Cook
Vice President
Midland Project
1945 West Parnall Road
Jackson, MI 49201

Gentlemen:

We have reviewed your proposal to have the Stone and Webster Corporation (S&W) perform the third party independent assessment of the soils remedial work activities.

The staff has received sworn statements from the S&W Corporation and from the key S&W personnel (Attachments A and B respectively) attesting to corporate and individual independence.

The staff has also reviewed a letter, J. E. Brunner to W. D. Paton, dated November 15, 1982 (Attachment C) which describes the contracts undertaken by S&W for the Consumers Power Company and indicates that S&W or its subsidiaries have no holdings of Consumers Power Company stocks. The attachments to this letter have been subsequently notarized.

The staff has considered the qualifications of both the S&W organization and the individuals proposed as team members to conduct the independent review of Consumers Power Company's management of the Midland soil project. Inputs to this review included the information supplied in the above submittals, the staff's existing knowledge of S&W performance at other nuclear power plants and information as to S&W personnel competence.

Our evaluation of these documents revealed that the competence and independence criteria have been met as set forth in Chairman Palladino's letter to Congressmen Ottinger and Dingell of February 1, 1982.

Based on our reviews we have determined that the S&W Corporation is an acceptable organization to perform the third party assessment of the soils remedial work; however, the scope of the S&W assessment should be broadened to include the following:

8303210307

(1) Provide a QA overview and assessment of the design work packages to ensure accuracy and adequacy.

(2) Provide a QA overview and assessment of the QC inspector requalification and certification program.

(3) Provide a QA overview and assessment of the training conducted for all personnel in the soils remedial work effort.

(4) Expand the work contract to include an assessment of all underpinning work on safety-related structures on which underpinning work is done while your contract with Scone and Webster is in effect.

In addition, the Midland Section has reviewed Consumers Power Company's performance regarding the installation of Piers W12 and E12 and has concluded that no major discrepancies were identified during this work (Memorandum, R. Landsman to R. F. Warnick, dated 2/15/83, Attachment D).

Stone and Webster in their letter dated February 14, 1983 (Attachment E) also indicated that no major performance problems have been identified. They have stated that in their opinion additional underpinning work could be released for construction.

Based on the inclusion of the previously described contract changes, your performance record regarding Piers W12 and E12, and the acceptability of the Stone and Webster Corporation as the third party independent reviewer, we conclude that underpinning activities of safety-related structures may proceed. Please submit documentation of the expansion of the third party assessment to include the four areas identified above. The work activities will be authorized in accordance with the approved NRC/CPCo Work Authorization Procedure.

Should you have any questions regarding this letter please contact Mr. R. F. Warnick of my staff.

Sincerely,

Original signed by
A. Bert Davis

James G. Keppler
Regional Administrator

Enclosures: As stated

cc w/encl:
See attached distribution list

concurrence by telephone

OFFICE	RIII		Lewis	Davis	Keppler	Eisenhut	
SURNAME	Shafer/la	Warnick	2/22	2/22	2/22/83	E Adensam 2/23/83	
DATE							

cc w/encl:
DMB/Document Control Desk (RIDS)
Resident Inspector, RIII
The Honorable Charles Bechhoefer, ASLB
The Honorable Jerry Harbour, ASLB
The Honorable Frederick P. Cowan, ASLB
The Honorable Ralph S. Decker, ASLB
William Paton, ELD
Michael Miller
Ronald Callen, Michigan
Public Service Commission
Myron M. Cherry
Barbara Stamiris
Mary Sinclair
Wendell Marshall
Colonel Steve J. Gadler (P. E.)

ATTACHMENT D

#2

February 15, 1983

MEMORANDUM FOR: R. F. Warnick, Director, Office of Special Cases

THRU: W. D. Shafer, Chief, Midland Section

FROM: R. B. Landsman, Reactor Inspector, Midland Section

SUBJECT: LICENSEE PERFORMANCE ON PIERS 12E and 12W

RIII on December 9, 1982, authorized CPCo to initiate work activities pertaining to the drift, excavation and installation of Piers 12E and 12W. Subsequent to that authorization the licensee began work on December 13, 1982. Due to the Diesel Generator Building Inspection I have had only enough time to perform five inspections to determine the acceptability of the licensee's work in regards to these piers including removal of fill concrete, shaft excavation and bracing, bell excavation and bracing, and reinforcing details and proposed concreting activities.

I have identified three concerns since underpinning work began which have been subsequently corrected or are in the process of being corrected by the licensee. They are:

a) That the craftworkmen were not receiving the required amount of specialized remedial soils underpinning training. The licensee has agreed to expand the scope of craft training, but does not have the details worked out to date.

b) That the licensee wanted to use a super plasticizer as an additive to the concrete mix in lieu of good concreting practices, i.e., consolidation by vibration. The licensee after what I consider to be excessive discussions finally agreed to vibrate all underpinning concrete in accordance with good engineering practice.

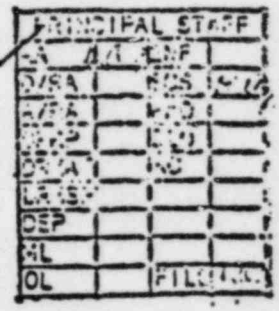
c) That the third party independent assessment team is not reviewing the design documents for technical adequacy. They are only doing implementation review to assure that the design documents are being followed. From discussions with Stone and Webster personnel, it was determined that this important parameter was not included in their contract. The licensee is presently considering including this in the contract documents.

Besides these three concerns no other issues or deviations from regulatory requirements have been identified.

OFFICE	RIII			R. B. Landsman Reactor Inspector			
SURNAME	Landsman:la	Shafer					

8303210312

ATTACHMENT E



STONE & WEBSTER MICHIGAN, INC.

P.O. BOX 2325, BOSTON, MASSACHUSETTS 02107

Mr. J. G. Keppler
Administrator, Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

February 14, 1983
J.O. NO. 14358
MPS-8

RE: DOCKET NO. 50-329/330
MIDLAND PLANT - UNITS 1 AND 2
INDEPENDENT ASSESSMENT OF AUXILIARY BUILDING UNDERPINNING
ASSESSMENT OF WORK ON PIERS W12 AND E12

As of February 11, 1983 the Stone & Webster - Parsons Brinckerhoff Assessment Team has observed the excavation, placing of reinforcement, and concreting of underpinning pier W12, and the excavation, and placing of reinforcement for underpinning pier E12. In addition, the Assessment Team has reviewed the drawings, procedures and other documents pertaining to the underpinning work and has observed the performance of the Quality Assurance and Quality Control Organizations during the progress of the work.

During the period that the Assessment Team has been on site, daily meetings have been held with Construction, Quality and Engineering personnel to obtain additional information and discuss observations.

The Assessment Team has issued twenty Weekly Reports to the U.S. Nuclear Regulatory Commission. These reports have described the activities of the Assessment Team and summarized their observations and findings.

The Assessment Team has issued a total of five Nonconformance Identification Reports. Four of these Nonconformance Identification Reports have been closed out to the satisfaction of the Assessment Team. The remaining open Nonconformance Identification Report was issued on February 10, 1983 and the Assessment Team feels that it can be closed out in the near future without impacting the progress of the underpinning.

The underpinning work is being performed in accordance with the construction and quality procedures. As the work has progressed, the procedures have been modified based upon experience gained during the construction of piers W12 and E12. The Assessment Team feels that these minor changes are appropriate and will have a positive effect on the quality of the underpinning work.

FEB 15 1983

8302230157

JGK

Based upon these observations and findings, the Assessment Team is of the opinion that additional piers could be released for construction. This will benefit the quality of the work by allowing the Contractor to maintain the experienced labor teams from piers W12 and E12.

If you have any questions, please contact me at (617) 589-2067.

A.S. Lucks
Project Manager

Attachment #10

Federal inspector testifies: Attention to detail lacking

4-29-83

By JAMES ISELER
Daily News staff writer

Problems at the Midland nuclear plant stem from a "lack of attention to detail" by Consumers Power Co. officials and workers on the site, a U.S. Nuclear Regulatory Agency inspector told a federal panel Thursday.

The inspector, Ross Landsman, discussed several problems with work to shore up buildings that cracked after settling excessively because they were constructed on poorly-compacted soils.

"It just seems to be the attitude on site," Landsman said. "No one's harping on people to do the job right the first time."

Landsman was one of four NRC inspectors testifying before the federal Atomic Safety Licensing Board on quality assurance (QA), a series of checks and inspections to insure the plant is built safely.

The hearings will continue today and next week at the Quality Inn, 1815 South Saginaw. They are open to the public.

THE WITNESSES were questioned all day by Lynne Bernabei, a Washington, D.C., attorney representing citizen intervenor Barbara Stamiris. Ms. Bernabei said she plans to show Consumers lacks the "character and competance" to build and operate the plant safely.

Consumers will defend its programs when utility officials testify at the hearings next week. The NRC also will present its current position on the adequacy of the programs.

'I don't trust 'em,' Nuclear Regulatory Commission inspector Ross Landsman said of Consumers Power Co. 'There's too many examples of them putting the cost and schedule ahead of quality.'

Landsman said the problems were discovered in the early stages of the remedial soil work, called "underpinning," and did not require a stop work order.

"Had they been pouring concrete, I would have stopped the work," Landsman said.

Following an ASLB order last year, NRC staff members must approve each stage of repair work before construction can begin. Without the provision for prior approval, Landsman said, work at the site should not continue.

"I don't trust 'em," he said. "There's too many examples of them putting the cost and schedule ahead of quality."

As an example, Ms. Bernabei mentioned an April 24, 1982, incident in which workers drilled through a safety-related duct bank during excavation work.

Although Consumers officials stated earlier that the drill "nicked" the duct bank, Landsman called that a "gross misrepresentation."

"As opposed to only nicking it, he (the worker) drilled through it 13 more times," Landsman said.

HE ALSO SAID it is "like pulling teeth" to get necessary documents from the utility, a situation which inhibits the effectiveness of inspections.

"We might have half-a-dozen items going on at once and the reason is because we can't get documents," Landsman said, adding the utility often has trouble obtaining the information from Bechtel Power Corp., its chief contractor.

"Does this indicate to you Consumers doesn't have adequate control over its contractor?" Ms. Bernabei asked.

"Yes," Landsman replied.

"We considered it a minor form of harassment," said Wayne D. Shafer, former chief of the Midland section of the NRC's Office of Special Cases.

Ms. Bernabei said later the Landsman testimony supports her argument about Consumers' character.

"They can't control their contractor so how in the hell can they run a nuclear plant?" she asked.

IN OTHER TESTIMONY Thursday:

- Landsman testified he still is concerned with the lack of previous quality assurance experience by QA supervisors on the site. He said only one of four supervisors has any QA experience.

Consumers has changed QA supervisors various times, moves which Landsman said came about because of NRC concern. However, even though unqualified inspectors were replaced, the replacements also are not qualified, Landsman said.

"Every time we raised a concern about a certain individual, they'd move him around," Landsman said. "Certain individuals, I don't feel are qualified to do their job."

- Shafer said a "handful" of quality control (QC) inspectors were certified when the ASLB gave the go-ahead for the underpinning work in December. There were enough to begin the project, he said.

Other inspectors were certified after being trained while the work proceeded. Shafer said the soil underpinning is unique and that inspectors needed experience with the project before they could be certified.

- The NRC notified the hearing board of a problem with a row of piers being built underneath the auxiliary and turbine buildings. The piers are part of the underpinning work designed to prevent the buildings from sinking further.

The problem occurred during a test load to check distribution of weight on one of the piers, NRC attorney William Paton said.

"The load isn't going where they wanted it to go," Paton said. "The problem is very recent and no one's really sure what's going on."

Midland Daily News

Midland Daily News

May 5, 1983

QC procedure was 'abused' at n-plant, inspectors say

By JAMES ISELER
Daily News staff writer 5-5-83

Problems at the Midland nuclear plant went undetected because procedures designed to catch poor workmanship during the last two years were "abused," federal nuclear inspectors said Wednesday.

However, Consumers Power Co. has discontinued the procedure, known as "in-process inspection notices" (IPINs), and will reinspect all work reported under the procedure, the inspectors said.

The testimony came from four U.S. Nuclear Regulatory Commission inspectors during a hearing before the Atomic Safety and Licensing Board.

NRC SENIOR resident inspector Ronald J. Cook said that the procedure itself was adequate for reporting building deficiencies, but that some Bechtel Power Corp. quality control inspectors misused the IPIN system.

Another inspector, Dr. Ross Landsman, said the IPIN abuses indicate quality control managers "did not have a firm grasp on what they were doing."

Attorney Lynne Bernabei, representing citizen intervenor Barbara Stamiris, said Landsman's statement supports her claim that Consumers lacks the competence to build the plant.

Consumers will defend the procedures when its witnesses testify later in the hearings. The hearings are scheduled to continue through Friday and resume in June. They start at 9 a.m. at the Quality Inn, 1815 South Saginaw, and are open to the public.

THE PROBLEM arose because some quality control (QC) inspectors used IPINs as final reports of construction problems rather than for their proper purpose, as a preliminary inspection, the witnesses said.

Under the IPIN procedure, once the number of problems reached a certain level, inspectors stopped documenting them, Cook said.

"As a result, measures were not established to prevent the continued installation and use of these nonconforming items," according to an NRC violation statement issued against Consumers.

Supposedly, the work was to be redone and reinspected, a procedure known as the "return option." But some work was never sent back to the construction stage, the violation statement said.

Consumers "should have realized they were creating the potential for misuse of the IPIN" by allowing the return option, NRC inspector Ronald N. Gardner said.

"Had they used the IPIN procedure properly, that is, document all the deficiencies on the IPIN, there wouldn't have been a problem," Landsman added.

Once the NRC issued a violation for the IPIN abuses in February, Consumers discontinued using IPIN, Landsman said. The procedure had been used since June 1, 1981.

"They promised to reinspect anything they ever wrote an IPIN on," Landsman said.

IN OTHER ACTION at the hearings, NRC attorney William D. Paton told the ASLB that the agency approved TERA Corp. to perform an independent review of the plant's auxiliary feedwater system. The firm has offices in Washington, D.C., and San Francisco.

Darl S. Hood, of the NRC's Nuclear Reactor Regulation office, called the review a "cradle to grave" procedure that will study everything from the system's design to its installation and testing.

TERA also has asked to perform proposed reviews of the diesal generator power system and the portion of the heating, ventilating and air conditioning system which would keep the plant's control room habitable during a radioactivity release.

Hood said the NRC has not yet approved the firm for the last two areas but added he didn't "anticipate any problems finding them acceptable."

The audits are to be performed independently of the NRC's inspection process.

Midland Nuke

Gardner, Cook, Landsman,

Midland Daily News
Wednesday, May 4, 1983, Midland, Michigan

Next six months may be do-or-die for nuclear plant

By PAUL RAU
Daily News staff writer

Halting construction work at the Midland nuclear plant will be considered if the latest programs to improve the plant's quality aren't effective, a nuclear regulator testified Tuesday in Midland.

James G. Keppler, Region III administrator for the U.S. Nuclear Regulatory Commission, said his agency already is doing an unprecedented amount of "hand-holding" with Consumers Power Co., and that he will consider shutting down the project if the situation worsens.

Keppler said the utility's performance over the next six months will be the critical test. That should be enough time to judge whether Consumers Power's new construction completion plan and associated third-party reviews of the plant's quality will assure proper construction, he said.

Keppler told the Atomic Safety and Licensing Board (ASLB), which has been conducting Midland plant licensing hearings this week, that the NRC has abandoned "true regulatory posture" and has become too involved with overseeing construction at the Midland plant.

"WE'RE GETTING VERY close to almost doing it ourself," he said of building the plant. "I really feel that the NRC, as a regulator, should not be in that role."

Keppler said the NRC adopted the role due to continuing breakdowns of quality assurance (QA) programs at the Midland plant. He was asked by ASLB Chairman Charles Bechhoefer if the NRC should take even more control of the project, such as requiring Consumers and Bechtel Power Corp. to get the NRC's written approval for each step of the construction work.

"I'll probably recommend that the job be stopped if we have to go that far. I really want to get out of that role as soon as I can, as soon as I have confidence that QA will be implemented properly," Keppler testified.

Keppler believes that the new program — involving more NRC scrutiny and a series of inspections and outside audits of the plant's quality and design — should turn the project around and make a future work halt unnecessary. Most work on the plant's safety-related systems is now voluntarily halted by Consumers Power to permit reinspection.

"It's my view that that effort should be sufficient to provide the kind of assurance this board needs, the NRC needs and the public needs that the plant will be built properly. If that program doesn't work, I don't know what will unless we build it ourselves," Keppler said.

IN OTHER TESTIMONY, Keppler told citizen intervenor Mary Sinclair that the public will not have a vote in the choice of outside firms to conduct the independent, third-party audits of the plant's quality and design.

"I don't believe in the shared process of decision-making, and I intend to resist that as long as I have this job," he said.

In a related area, Keppler said that a letter from the Government Accountability Project (GAP) protesting the hiring of Stone & Webster, an engineering company, to oversee soils work at the Midland plant is a "diatribe" that ignores good work by the firm.

Mrs. Sinclair had been arguing, based on GAP's research into S&W, that the firm shouldn't have been hired at Midland because it had exhibited poor QA and caused "huge cost overruns" at the Shoreham and Nine Mile Point nuclear plants.

"There isn't an engineering organization in this country I couldn't write a similar diatribe about," Keppler told her. "Organizations are not pure. They do some jobs well, and some jobs they don't do well. Look at Bechtel — their work at Midland is not as good as at other facilities."

MICHAEL MILLER, an attorney representing Consumers Power, also cross-examined Keppler on positive aspects of work at the Midland plant. Keppler agreed that the quality audits by the outside firms will be more thorough than the NRC can perform.

Keppler also agreed that eight recent events tend to assure him QA is improving, although GAP attorney Lynne Bernabei diluted that testimony somewhat by pointing out that some of the improvements were done at the NRC's initiative and not Consumers'.

But Miller said he'd made his point. "There's a lot going on at Midland now that is positive and not negative as far as the NRC is concerned," he said.

NRC's Keppler: I'm as tough as you'll find

A government official who oversees work at the Midland nuclear plant and many others says he's a tough regulator.

James G. Keppler, administrator of the U.S. Nuclear Regulatory Commission's Region III office, made the comment Tuesday during the licensing hearing for the Midland plant.

Keppler apparently was perturbed by a line of questioning pursued by intervenor Mary Sinclair, and defended his actions regarding the Midland plant.

"I've been as tough on regulation as any regional administrator in the country," said Keppler, noting he's issued more fines and and taken more enforcement actions than other NRC officials in comparable positions.

He said firms which build nuclear plants "think I'm way out in left field in terms of regulating the industry. Believe me, we're regulating tough in Region III."

Keppler said he and Mrs. Sinclair disagree only on how to handle problems at the Midland plant, not that there are problems. "If you don't respect my judgment on it, I'm sorry," he told her.

- Attachment #11

edy. Page B-5
age B-10

THURSDAY, APRIL 28, 1983 The Saginaw NEWS B-1
METRO

GAP: Inspectors wanted nuclear plant shut down

BY DAVE SEDGWICK
News Staff Writer

MIDLAND — An activist "whistle-blower's" group hopes to prove that construction flaws at the Midland Nuclear Plant are more severe than the Nuclear Regulatory Commission so far has admitted.

A spokeswoman for the Government Accountability Project said the group hopes to prove that top NRC officials played down the worrise of on-site inspectors about Consumers Power Co.'s quality control program.

The Atomic Safety and Licensing Board now is reviewing the quality control issue, the latest stage of Consumers Power bid for an operating license.

After Wednesday's ASLB hearing, GAP spokeswoman Billie Garde said she has requested the documents under the Freedom of Information Act. The NRC has turned over some papers to GAP and withheld others.

Ms. Garde contends that the breakdown in quality control is worse than the NRC has publicly admitted. As proof, she released the contents of an NRC log which indicates that NRC inspectors wanted to recommend a halt to construction last fall.

The NRC document was a daily progress report on an intensive NRC inspection of the diesel generator building. The structure is supposed to supply emergency power to the plant in case of blackout.

Wayne Shafer, chief of the Midland Section for the NRC's Office of Special Cases, kept the daily log of the NRC probe.

The log showed the following entry for Nov. 10, . . . "The team is uptight — wants to recommend shutdown — will probably go for (civil penalties.)"

Shafer confirmed the authenticity of the document. But he noted that the log only indicated the inspectors' feelings at that time, and was not a formal recommendation.

"It was an ongoing investigation, and we were upset because we had found a lot of problems," Shafer said.

The agency's regional headquarters in Illinois would have had to approve any shutdown order, he noted.

The NRC's Midland team never made a formal recommendation to headquarters on a shutdown, Shafer said. Consumers Power forestalled any possibility of an NRC-ordered shutdown when the utility halted most construction work last December.

The agency later fined Consumers Power $120,000 for the construction flaws. According to Garde, some agency inspectors wanted to take tougher steps against Consumers Power.

NRC officials today bluntly denied that the log entry showed any disagreement within NRC ranks.

"I don't think there is any dissension," said Bob Warnick, director of the NRC's office of special cases. "Everybody is not identical in their thinking but I don't think it's a big deal."

Warnick said the NRC inspectors agreed that a shutdown might have been necessary but that Consumers Power took the initiative.

"We were thinking along the same lines," Warnick said.

Despite NRC denials, Ms. Garde stuck to her contention that the NRC is divided.

"I think there is significant dissension, and the log entry is one indication of that," she said.

The hearings are certain to heat up next Monday, when James G. Keppler, the NRC's regional administrator, comes to Midland to testify on Consumers Power's quality control problems.

In his written testimony, Keppler has indicated that the utility can no longer be trusted to build the plant properly — that an independent auditor must review construction.

Clare man faces murder trial

Midland Daily News

May 4, 1983

N-plant design lacked 'common sense'

By LORIE SHANE 5-7-83
Daily News staff writer

The original design for part of the Midland nuclear plant lacked "common sense," an NRC inspector said Friday, and didn't adequately protect public health and safety.

Though it did meet NRC requirements, Dr. Ross Landsman said the original design for the plant's auxiliary building, including its attached control tower and electrical penetration areas, was deficient.

Landsman was testifying during a federal hearing on the nuclear plant. The hearing is to determine whether work to fix soil problems at the plant is adequate and whether Consumers Power Co. should get an operating license.

Friday's session covered various topics, including Consumers' attitude and actions regarding quality assurance, as well as the NRC's own inspection procedures.

THE AUXILIARY BUILDING sits between the two nuclear reactors. The control tower and electrical penetration areas are structurally attached to it.

The original design called for the auxiliary building to rest on very stiff natural clay, while the control tower and electrical penetration areas would rest on "controlled," compacted fill soils.

Problems surfaced after those buildings were constructed, when Consumers Power Co. discovered the fill soils were not compacted adequately. Consequently, the part of the building which rested on fill soils settled more than the part resting on hard clay, which put stress on the building.

The utility now is underpinning parts of the auxiliary building with concrete piers to make sure it is adequately supported.

Landsman said that even if the original design had been followed properly — and the fill soil compacted adequately — he still does not believe the facility could have been operated "with due regard for public health and safety."

He said the original design calling for the structure to rest on two types of soil — hard clay and compacted fill — did not make engineering sense because the part resting on fill would not get adequate support.

LANDSMAN SAID under cross-examination by Consumers Power Co. attorney Michael Miller that the design did meet NRC requirements, though he added that "if it's not a design deficiency (in the regulatory sense), it should be."

He also said that the NRC itself was aware of the auxiliary building design in 1969 and approved it as part of the utility's overall preliminary design before it granted Consumers a permit to begin construction.

NRC project manager Darl Hood said after the session, however, it is "misleading to say we approved the auxiliary building" design in 1969. He said the NRC does not do an in-depth review of each aspect of the preliminary design, but looks at the "design concept."

IN OTHER AREAS of testimony, the NRC's Wayne D. Shafer said there has never been a nuclear plant in Region III that was completely free of nonconformances.

Shafer has said in past testimony that quality should be "built in," not "inspected in" at nuclear plants.

Under cross examination, he agreed if it were possible to build in quality with 100 percent success, then there "would be no need for the NRC."

But, Shafer added, that doesn't happen in the "real world."

Miller provided a chart showing the number of items of noncompliance found at all Region III plants since 1980. There were 61 such items at the Midland plant, while the average of all 10 plants was 50.3 items. The number at other plants ranged from 19 to 102 items.

The largest number was found at the LaSalle County Nuclear Station in Illinois, but Shafer said that can be attributed to the fact that the NRC steps up its inspection effort when plants near completion.

MILLER ASKED SHAFER about several memorandums or letters which indicated Consumers was planning to revise inspection procedures which the NRC has said allowed problems to go undetected.

Shafer has criticized Consumers for being "untimely" in dealing with the IPIN system. That stands for "in-process inspection notices," which quality inspectors use to record construction problems. The NRC has said some inspectors did not report all the problems they found and not all the work problems found were corrected.

The NRC told Consumers about its concern with the IPIN system last fall, Shafer said, but Consumers didn't realize it was "such a big problem" until January.

Miller showed correspondence between Consumers officials, however, which indicated they were making plans last fall to revise the IPIN system.

Midland Mich.

Shafer Landsman

Attachment #12

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

APR 0 5 1983

Government Accountability Project
Institute for Policy Studies
ATTN: Ms. Billie P. Garde
Director
Citizens Clinic for Accountable Government
01 Que Street, N. W.
Washington, D. C. 20009

Dear Ms. Garde:

Your letter of March 7, 1983, commenting on issues presented at the February 8, 1983, public meeting and regarding Consumers Power Company's (CPCo) Construction Completion Program (CCP) for Midland Units 1 and 2 described in a January 10, 1983 letter from CPCo, is being answered in part by Mr. Eisenhut. He has requested Region III to respond to those portions of your letter addressing matters which are the responsibility of Region III.

You expressed concern that the responsibility for the on-site inspectors and the Midland Section has been transferred to the Regional Administration and Washington-based NRC officials. Let me assure you that the responsibility for the Midland resident inspectors and the Midland Section inspectors has not changed. They still report to me through first and second line supervision. Likewise, the Regional NRC inspection responsibility for the Midland plant has not changed since it was assigned to the Office of Special Cases in July 1982.

In your comments you expressed concern that there have been a number of incidents within the last several months where Regional personnel have indicated one answer pertaining to construction work, and then other action was taken after approval from NRR. We disagree with your characterization of the facts. Our position on each of your three examples is as follows:

1. While it is true that Ross Landsman was not included in the conference call of February 8, 1983 regarding pier load test sequencing, his input was subsequently provided to both CPCo and NRR. At that time he agreed with the conclusions and decisions reached during the previous February 8 phone call.

2. Region III (RIII) personnel gave approval for doing the Feadwater Isolation Valve Pit (FIVP) jacking and they were aware of the licensee's schedule when they gave their approval. The RIII personnel who were at the ASLB hearing (the same ones who gave the approval) do not remember making the statement you attributed to them; however,

8304110591

they have stated that any references made by them concerning FIVP work activities commencing in March or April pertained to the actual drifting under the FIVP to pier 9 and not to the FIVP jacking work. The drifting actually commenced on February 28, 1983.

3. The NRC staff believes that "no major discrepancies" have been found in the actual underpinning work. In reference to the cracks identified during FIVP jacking operations, the licensee submitted a report to the NRC which concludes that the cracks were not indicative of any structural damage having occurred to the FIVP. The NRC is currently reviewing this report and no discrepancies have been identified thus far. In reference to the February 15, 1983 memorandum from Ross Landsman to R. F. Warnick, the three issues identified in the memo were not considered to be major discrepancies. The three issues have been satisfactorily addressed by the licensee.

With respect to another of your concerns, RIII personnel who were involved in the initial contacts with the Stone and Webster (S&W) organization do not believe that anything they said or did prior to February 24, 1983, the date S&W was approved, could have given the impression that S&W's onsite activities had been approved by the NRC.

You also expressed concern about the "as-built" condition of the plant and who will identify the problems at the plant. In this regard, RIII expects the licensee's drawings and documents to reflect the plant as-built condition. The special inspection of the diesel generator building performed by the Midland Section identified differences between drawings and actual construction. We expect the licensee to identify existing differences and other problems at the plant. In the CCP the licensee has committed to do this. The NRC is requiring CPCo to expand the CCP overview to include the licensee's identification of problems. After the licensee has completed their problem identification process, the Office of Special Cases plans to conduct additional inspections to determine whether the licensee's inspection effort has been acceptable. The NRC has also required that a third party conduct an independent construction verification program after the CCP has identified the problems. This should provide a second means of determining the acceptability of the licensee's inspection effort.

Regarding matters which you identified as generic problems, such as QA/QC documentation, training and recertification of HVAC welders, unidentifiable electrical cables, untrained QC inspectors, and material traceability inaccuracies, the RIII inspectors have or will address each one. Our practice,

when the NRC identifies a generic problem, is to require the licensee to determine whether or not that generic problem exists in other areas of their plant and if it does, what actions they have taken or will take to address the generic concerns. Our inspectors review the licensee's response and assess the acceptability of it. The following specific actions have or will be taken to address each of the above listed concerns.

1. The RIII staff is currently reviewing the HVAC welder qualification issue. We will begin our review of other HVAC (Zack) issues in the near future.

2. The NRC required the licensee to reinspect electrical cables to make sure the correct cables are installed. As of March 24, 1983, seven cables were found by the licensee to be other than that specified by design requirements out of 8,148 cables inspected.

3. QC inspector training has been reviewed and the licensee has been required to improve QC inspector training.

4. We have required the licensee to address the material traceability problems identified to date.

We are not aware that what is and what is not "Q" soils remedial work is a subject of controversy. As of March 10, 1982, all remedial soils work was determined by all parties to be "Q". This determination was further clarified by the May 7, 1982 ASLB order which adopted use of drawing C-45. This drawing clearly identifies "Q" remedial soils boundaries.

The following information is presented in response to your questions regarding the approval and work of Stone and Webster in their soils overview.

1. We judged the adequacy of the initial S&W work by whether or not our inspectors found problems with the licensee's work that we would have expected the overviewer to find. We also based our judgement on the adequacy of their reports.

2. We have not reviewed S&W methodologies and do not plan to unless we find significant problems which they have missed.

3. We have not reviewed the revised contract regarding the assessment of underpinning work on safety-related structures.

Regarding the procedure to be used to approve the independent third party to overview the CCP, the Region will follow basically the same procedure as we used in approving Stone and Webster for the soils overview. A

meeting was held in Midland on February 8, 1983 to discuss the CCP and to hear comments from members of the public. Selection of the overviewer will be proposed by the licensee and that selection will be submitted to the NRC for approval. We do not plan to hold a public meeting to hear comments on the independent third party proposed by the licensee to perform the CCP overview; however, we will consider all written comments received before our decision.

If you have any questions regarding this response, please contact Mr. Robert Warnick (312/932-2575).

Sincerely,

A Bert Davis

for James G. Keppler
Regional Administrator

cc: DMB/Document Control Desk (RIDS)
Resident Inspector, RIII
The Honorable Charles Bechhoefer, ASLB
The Honorable Jerry Harbour, ASLB
The Honorable Frederick P. Cowan, ASLB
The Honorable Ralph S. Decker, ASLB
William Paton, ELD
Michael Miller
Ronald Callen, Michigan
Public Service Commission
Myron M. Cherry
Barbara Stamiris
Mary Sinclair
Wendell Marshall
Colonel Steve J. Gadler (P.E.)

Attachment #13

Midland Daily News, Midland, Michigan

Issue at nuclear hearing: What does 'well under way' mean?

By LORIE SHANE
Daily News staff writer

Whether the U.S. Nuclear Regulatory Commission was misled about work at the Midland nuclear plant became a question of semantics Thursday, as NRC inspectors explained how they interpreted statements made by a Bechtel Power Corp. official.

The inspectors testified during a federal hearing on plant licensing.

The issue centers around a March 10, 1982, meeting and a March 12, 1982, telephone call between NRC, Consumers Power Co. and Bechtel officials.

The meeting and telephone call were to discuss how much of the ongoing soils work at the plant should have to meet quality assurance requirements.

Two NRC inspectors — Dr. Ross Landsman and Ronald Cook — have said they were led to believe during the meeting and phone call that work to install monitoring instruments as part of the soils work was nearly complete.

Based on that, the NRC did not require Consumers Power Co. to go back and make the finished work meet quality assurance requirements, though it agreed the utility should show the work at least was acceptable, the inspectors said.

During a later, on-site visit, however, the inspectors learned the work was only in the early stages.

The inspectors did not say they were deliberately misled to believe the work was complete, but that if they had known on March 10 that the work was only in the early stages they would have required the company to meet quality assurance regulations.

LANDSMAN AND COOK have testified that Bechtel Power Co. official Alan J. Boos made statements at the March 10 meeting which led them to believe the instrumentation was nearly complete, though they don't remember the exact statements.

Others at the meeting, including NRC, Consumers and Bechtel officials, have said that they either do not remember Boos' statements or that Boos mentioned the instrumentation, but did not give a status report on its completion, according to Charles H. Weil, the NRC official who investigated the incident.

Some people said they took Boos to mean the work had begun, but was not finished, according to Weil's report.

Boos himself told the investigator that he was trying to say that the work was under way, but not complete, according to the report.

REGARDING THE MARCH 12 telephone call, a written transcript shows that Boos said the instrumentation was "essentially well under way."

"Does the word 'essentially' mean 'almost,' or 'nearly'?" Consumers attorney Michael Miller asked Landsman.

"Yes," Landsman responded.

"Okay, do the words 'well under way' mean the same thing as 'complete'?" Miller asked.

"Yes," Landsman replied again.

Cook also said he took the phrase "essentially well under way" to mean nearly complete, although he agreed that in the nautical sense the term "under way" refers to the beginning, not the completion, of a ship's voyage. Cook is in the U.S. Navy Reserve.

Miller also asked about the wording of Landsman's written statement to Weil, in which Landsman said it was agreed at the March 10 meeting that work which had begun before that date would not be required to have a quality assurance plan.

Since the work on the instrumentation had begun prior to March 10, Miller asked why the NRC cared how much of it was complete.

Landsman replied that "in the context I used the word 'begun,' it's also meant to mean 'begun and essentially complete'."

"I see, so 'begun' means complete, too, or essentially complete," Miller said.

Landsman did not immediately respond, but later said Miller was "twisting my words around out of context."

WEIL DOES NOT draw any conclusions in his report, but said his personal opinion is that if you use the term "lying" to mean any misstatement of fact, then "most definitely he (Boos) lied."

If the term "lying" means making misstatements deliberately, then in this case "the facts don't bear it out," Weil said.

Miller took issue with the cover letter to Weil's report, which states that the NRC staff was misled by Consumers Power Co. and Bechtel employees.

He pointed out during questioning that the only statements made were by Boos — a Bechtel employee — and that nobody recalled misleading statements made by Consumers Power Co. officials.

In that sense, the cover letter itself is misleading, Weil agreed, though he said the NRC tends to view Consumers and Bechtel, as well as all the subcontractors at the site, as "one and the same."

Weil did not write the cover letter; it was written by NRC Region III administrator James G. Keppler.

Landsman said he thought the reference to Consumers related to a separate incident.

[redacted] Attachment #14

Handwritten notes pertaining to the GAP discovery request on Midland for B. Stamiris.

Item 5. Documents relating to independent audits at Midland.

1. 2-24-83 Notes on telecon with B. Garde. Follow-up on Midland meeting.
2. 4-18-83 Notes from meeting with TERA on IDCVP
3. Undated notes on TERA IDVP
4. Undated notes on TERA IDVP
5. Undated notes on ACRS requested report on design quality and construction adequacy.

Item 7. Documents relating to the March 1982 SALP

6. Undated notes on Midland Salp meeting with Licnesee and Region III
7. 4-26-82 Notes on Midland SALP Licensee Meeting.

8. Record book with notes on telecons and meetings from 5-12-82 to present. Not complete.

(1)

Telecon w/ Billie Garde 2/24/83

Follow-up on Midland meeting -

GAP wants to provide a more technical analysis of CPCo's proposal -

Some kind of forum to present analysis
Wants to meet w/ NRC.

in next week or couple of days →

Reg. III + NRR people in Wash., D.C.

? Major details being worked between Cook + Eisenhut on S+W + CCP

* GAP would prefer a meeting or would present analysis in letter.

GAP analysis of CCP

• ACRS - Late March

MEMORANDUM OF CALL

Previous editions usable

TO: Elinor

YOU WERE CALLED BY- ☐ YOU WERE VISITED BY-

Billie Garde

OF (Organization) Gate Accountability

PLEASE PHONE ☐ FTS ☐ AUTOVC

933-2797

WILL CALL AGAIN ☐ IS WAITING TO SEE YC

☐ WISHES AN APPOINTM

(2)

... [illegible] -

4/13/83 -

- Orgm. plans for HUAC / Standing Arr. Sep. by early May -

Do we approve the Orgm. plan?

Protocol approval -

ID reviewer Approval -

QC plan on [illegible] -

(3)

Relative to TERA IDUP -

Division of responsibility between Reg. III + NRR. re implementation of the plan.

OCR report; 2 mo status reports CO/NRR
Leave w/ Region lead. findings; finding resolution.

- No CO audits of TERA.
- Warnick may not come.

(E)

Midland —
~~Note to:~~

TERA IDCUP — plan for review.
All inputs are in → Request for info
Address @ a meeting -

TERA independence + qual. → Rec'd 3/18.
Requested more info. 3/30
TR input to DL
[Online/Memo] 4/8/83

Ltr to CPCo.

Mtg. 4/13/83

- To discuss staff review of IDCUP plan
  - TR question
  - CP question/comment
  - Status of reptg. - comm
- To listen to TERA proposal to expand IDCUP plan to other systems
- To get NRC initial reactions to proposed expansion.

Attendees: TReviewers - Gilray, Sullivan, LeFave, Reg. III rep.; GAP(?); CPCo

the ACRS asked for a report on design quality and construction adequacy. They are looking for assurance that w/all the QA problems @ Midland in specific areas that we have not overlooked problems in other areas that have not yet reared their head. Is CPCo addressing this only ~~from~~ the AFW review?

But the INPO effort address "work in progress" only But ~~does~~ does integrate with TERA effort, you get both?

Only for the AFW system! Seen as a "sample" (audit)

Part it doesn't answer Okrent's problem with hidden problems. INPO goes from today & does only address forward fit. They do not investigate ~~what happened previously~~ TERA looks backward also.

But only for the AFW system! (We've come full circle!)

(6)

Bob -

Midland SALP meeting w/ licensee + Reg III.

SALP report is pretty negative in some respects. (Copy attached). Keppler told CPCo he was concerned w/ the finding for the period 7/80 - 6/81 as that was the period just preceding his testimony on O&A before the Licensing Board. He told CPCo he'd done to go home & try to reconcile the differences & meet w/ them again. Stamiris was there w/ friend. We got a copy of the preliminary report w/ the letter sent to CPCo. We are preparing a Board notification to send it to the Board.

Keppler asked about deferring the 5/11-14/82 hearing session until CPCo has a chance to respond / comment on the SALP report. They have until 5/16 to comment. We have a telecon w/ Paton (OELD) + Keppler planned for tomorrow (4/27) to discuss the hrg. session. I told Keppler that any delay was up to the Board, but I think Board members are booked for the rest of the month. We (you & I) need to talk re generic issues which were @ the time the Midland FSAR / OL application was noticed

but have been relegated to the back burner as not qualifying as USI's. They are all contentions in this OL hearing.

As an aside; were you aware of a remand issue on the CP that is currently before the Appeals Board on this case?

4/26/82 Midland SALP Licensee Mtg.
Manual Chapter on SALP.
Hind's paragraphs –

- Copy of prelim. SALP to Lic discs.

Cook – CPCo –
"applauding the purpose of the SALP":

Post inspection – May '81 – optimistic about ability to meet reqm't. – R-III backsliding in opinion of CPCo

- Objected to findings on design control

- Lic. activities – "selling short" amt. of work + qual of work earlier submitted. Work w/ staff to develop....

Want R III to QA work before initiation. (∴ RIII liable + no citations.)

Soils area – What's required needs to be defined.

Keppler – reconsid Assessment period
Point – things no better.

GOVERNMENT ACCOUNTABILITY PROJECT
Institute for Policy Studies
1901 Que Street, N.W., Washington, D.C. 20009
(202) 234-9382

DOCKETED

June 13, 1983

Honorable Chairman Nunzio Palladino
Honorable Victor Gilinsky
Honorable John Ahearne
Honorable James Asseltine
Honorable Thomas Roberts
United States Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Commissioners:

On behalf of the Lone Tree Council, concerned citizens of central Michigan, and numerous nuclear workers on the Midland Nuclear Power Plant site, the Government Accountability Project (GAP) through its' Citizens Clinic requests that the Nuclear Regulatory Commission (NRC) take immediate action to protect the future public health and safety of central Michigan residents through the following actions:

(1) Modify the Construction Permit (Midland Nuclear Power Plant, Units 1 and 2) to include mandatory "hold points" on the balance-of-plant (BOP) work and incorporate the current Atomic Safety and Licensing Board (ASLB or Board) ordered "hold points" on the soils remedial work into the Midland construction permit.

(2) Reguire a management audit of Consumers Power Company (CPCo) by an independent, competent management auditing firm that will determine the causes of the management failures that have resulted in the soils settlement disaster and the recently discovered Quality Assurance breakdown.

(3) Reject the Construction Completion Plan (CCP) as currently proposed, including a rejection of Stone and Webster to conduct the third party audit of the plant. Instead a truly independent, competent, and credible thrid party auditor should be selected with public participation in the process.

(4) Remove the Quality Assurance/Quality Control function from the Midland Project Quality Assurance Department (MPQAD) and replace them with an independent team of QA/QC personnel that reports simultaneously to the NRC and CPCo management.

(5) Increase the assignment of NRC personnel to include additional technical and inspection personnel as requested by the Midland Section of the Office of Special Cases (OSC); and,

(6) Require a detailed review of the soils settlement resolution as outlined in the Supplemental Safety Evaluation Report, incorporating a technical analysis of the implementaion of the underpinning project at the current stage of completion.

26pp

8310210163

I. BACKGROUND

The Government Accountability Project is a project of the Institute for Policy Studies, Washington, D.C. The purpose of GAP's Citizens and Legal clinics are to broaden the understanding of the vital role of the public employee, corporate employee, and private citizen in preventing waste, corruption or health and safety concerns. GAP also offers legal and strategic counsel to whistleblowers, provides a unique legal education for law student interns and public policy students, brings meaningful and significant reform to the government workplace, and exposes government actions that are repressive, wasteful or illegal, or that pose a threat to the health and safety of the American public.

Presently, GAP provides a program of multi-level assistance for government employees, corporate employees, and private citizens who report illegal, wasteful or improper actions. GAP also regularly monitors governmental reforms, offers expertise to Executive Branch offices and agencies, and state and local governmental bodies, and responds to requests by Congress and state legislatures for analysis of legislation to make government more accountable to the public.

In March 1982, GAP's Citizen Clinic became actively involved with the Midland Nuclear Power Plant. The Lone Tree Council had requested GAP to pursue allegations from workers of major problems at the Midland plant. After our preliminary investigation, we compiled six affidavits which we filed with the NRC on June 29, 1982. Since that time we have filed five additional affidavits. We are also preparing an expanded affidavit of one of our original witnesses, Mr. E. Earl Kent, concerning welding construction problems at the Midland site and four additional affidavits from current and former workers. Other alarming allegations continue to come to our attention from a large number of current workers who believe that reprisals and harassment will follow any revelations of construction problems to either their own management or the NRC. As a result of the intense "chilling effect" on the Midland site GAP is re-evaluating our normal investigation process in an attempt to determine a possible solution to the problem.

Since the fall of 1982 GAP has also been active in the evaluation of Consumer Power Company's proposals for a number of audits requested or required by the NRC in an attempt to determine and establish the quality of the work, the implementation of the Quality Assurance/Quality Control plan for the soils remedial work, and an independent design and construction verification(IDCV) of three plant systems. GAP has submitted several analysis letters which revealed substanial weaknesses in the programs, inadequate information to judge program adequacy, and basic lack of independence of the proposed main independent review contractors.

In late November the NRC Region III OSC's Midland Section completed an extensive inspection of the hardware and materials in the nuclear plants' diesel generator building. This inspection subsequently led to a $120,000.00 fine against CPCo for a quality assurance

breakdown. The inspection of the DGB building revealed an extensive backlog of quality assurance/quality control documentation, inability to provide materials traceability, unqualified and/or uncertified welders, and an In-Process Inspection Notification (IPIN) system that turned non-conforming items back to contruction instead of documenting quality failures on the appropriate Non-Conformance Reports(NCR).

In spite of the major revelations of inadequate construction practices the NRC Staff permitted the critical soils remedial work to begin in mid-December. It is GAP's position, well known to the Staff, that this premature approval violates the June 1982 request of the Advisory Committee on Reactor Safeguards(ACRS) to Chairman Palladino. GAP also believes that the NRC approval to commence the irreversible soils underpinning work makes a mockery out of the Atomic Safety and Licensing Board (ASLB) hearings currently in progress to determine whether or not the soils work should be allowed to continue.

Since February 1983 GAP has continued its attempt to determine the seriousness of the situation and the adequacy of the proposed solutions for the Midland plant. Our efforts at working with the administration of the Office of Inspection and Enforcement have been frustrating. For example, although NRC letters and public presentations were informative, they failed to provide the key methodology necessary to assess the adequacy of the proposed third-party program. When GAP investigators attempted to pursue the questions at the public meeting, they were told to "allow the NRC time to ask for those documents." (NRC Public Meeting, Bethesda, Maryland, November 5, 1982.) Subsequently, GAP repeated the request in its November 11, 1982 letter. Over two-and-one-half months after the original request, GAP finally received the NRC's response: "You may wish to request access to the documents from Consumers Power." (December 14, 1982 letter from James G. Keppler to Billie P. Garde.) Our request to CPCo was, of course, turned down.

Our February 8, 1983 analysis of the proposed Construction Completion Program (CCP) requested a number of considerations by the NRC, including the modification of the construction permit to maintain susupension of all safety-related work until the entire third-party review program--including the third-party selection, scope, and methodology -- was approved and incorporated into the construction permit. Our March 7, 1983 letter to the NRC raised further questions about the CCP generally, and particularly about the "closed-door" meetings that continued between CPCo and NRC RegionIII administration. In both a March 7, 1983 meeting with Nuclear Reactor Regulation(NRR) staff and IE staff and a March 10, 1983 letter to Mr. James Keppler we asked for an immediate response to allegations that we had received about negotiations over the details and acceptability of the CCP.

Mr. Keppler's response confirmed the fears of our internal sources. He stated that the NRC did not plan to hold a public meeting to hear comments on the independent third-party proposed by CPCo for the CCP overview, nor did they plan to review the methodology or the scope of the third-party review unless it was necessary. (March 28, 1983 and April 5, 1983 letters from Mr. James G. Keppler to Billie Garde.)

Since that time the NRC Staff and Mr. Keppler himself have testified before the ASLB in Midland, Michigan. His staff has gone on record with a deep distrust of CPCo as well as a lack of confidence in their ability to adequately build a nuclear power plant. Construction problems continue to surface, even with the safety-related work remaining halted. As recently as May 24, 1983 Mr. Thomas Novack, Assistant Director for Licensing notified the ASLB of a VIOLATION OF HOLD TAG DURING REMEDIAL UNDERPINNING CONSTRUCTION. (Exhibit I)

The alleged solution to problems stemming from a "poor management attitude" (testimony of Dr. Ross Landsman on April 28, 1983, ASLB) to the unknown extent of hardware problems is the CCP. Yet as late as June 3, 1983 CPCo was still submitting eleventh hour editions of this plan that continue to ignore basic programmatic flaws. Further, it is clear that the NRC Staff plans to evade or ignore public requests for the minimum necessary information to complete a responsible review of the proposed audit and completion plans.

Our experiences at the William H. Zimmer nuclear power plant in Ohio and at the LaSalle plant in Illinois have led us to be extremely skeptical of the NRC Staff's conclusion about the safety of nuclear power plants under construction. In those cases the Staff either ignored or missed major QA/QC violations at plants 97% and 100% complete, respectively. To illustrate, after the Staff virtually ignored GAP analysis and granted approval for full power operations at LaSalle, the plant was able to operate for less than 24 hours befor being shut down due to a hardware breakdown. At Zimmer, the Staff-approved Quality Confirmation Plan was so ineffective that on November 12, 1982 the Commission suspended all safety-related construc

As a result there is no basis for confidence in an NRC-approved CCP on faith. The basis for this extraordinary remedy must be fully disclosed, as well as the methodology for an independent review. The modification of the construction permit will be the first step in the right direction.

II. LEGAL BASIS

A. Legal Requirements

The law gives the Commission broad discretion to revoke, suspend, or modify the construction permit of an NRC licensee. 42 U.S.C. §2236 states that:

> A license or contsruction permit may be revoked, suspended or modified in whole or in part, for any material false statement in the application for license or in the supplemental or other statement of fact required by the applicant; or because of conditions revealed by the application for license of statement of fact or any report, record, inspection, or other means which would warrant the Commission to refuse to grant a license on an original application; or for

> failure to construct or operate a facility in accordance with the terms of the construction permit of license or the technical specifications in the application; or for the violation of or failure to observe any of the terms and provisions of this chapter or of any regulation of the Commission.

Part 50. 100 of Title 10 of the Code of Federal Regulations states the same criteria for the revocation, suspension or modification of a construction permit.

The NRC has a mandatory duty to excercise this authority when necessar According to the decision in Natural Resources Defense Council vs. U.S. Nuclear Regulatory Commission, 528 F. 2d 166(2nd Cir.1978), under the Atomic Energy Act of 1954, the NRC is required to determine that there will be adequate protection of the health and safety of the public. The issue of safety must be resolved before the Commission issues a construction permit. (Porter City Ch. of Izaak Walton League vs. Atomic Energy Commission, 515 F. 2d 513, 524 (7th Cir. 1975).)

B. Criteria to Excercise Discretion

According to 10 C.F.R. §2.202, the NRC "may institute a proceeding to modify, suspend or revoke a license or for such other action as may be proper by serving of the licensee an order to show cause which will: (1) allege the violations with which the licensee is charged, or the potentially hazardous conditions or other facts deemed to be sufficient ground for the proposed action." As interpreted by the Proposed General Statement of Policy and Procedure for Enforcement Action, published ig the Federal Register, 44FedReg. 66754, Oct. 7, 19 (10 C.F.R. §2.202,2.204), suspending orders can be used to remove a threat to the public health and safety, the common defense and securit or the enviroment. More specifically, suspension orders can be issued to stop facility construction when further work would preclude or significantly hinder the identification and correction of an improperly constructed safety-related system or component; or if the licensee's quality assurance program implementation is not adequate and effective to provide confidence that construction activities are being properly carried out. Moreover, orders can be issued when the licensee has not responded adequately to other enforcement action or when the licensee interferes with the conduct of an inspection or investigation or for any reason not mentioned above for which the license revocation is legally authorized. In order to help determine the significance of violations within this list, the Commission established "severity categories" ranging from the most serious structural flaws (Severity I), to minor technicalities (Severity VI). 44 Fed Reg, at 66758-59.

C. Specific Bases for Suspension

The Commission clearly has both the duty and the discretion to

...

modify the Midland Construction Permit.

In November 1982 Mr. Thomas Novack, the Assistant Director for Licensing issued to Dr. Paul Shewmon, the Chairman of the Advisory Committee of Reactor Safeguards the "Report on Midland Design and Construction Problems, Their Disposition, and Overall Effectiveness of the Effort to Assure Appropriate Quality." This report covered Midland's problems from the start of construction through June 30, 1982. It is attached as Exhibit 2. A review of this report indicates that the "Summary and Conclusions of Overall Effectiveness" is charitable in its observations.

The report contains the following statement:

> Consumers Power has on repeated occasions not reviewed problems to the depth required for full and timely resolution. Examples are: (1) rebar ommissions (1975); (2) tendon sheath location errors (1977); (3) Diesel Generator Building Settlement (1978); and (4) Zack Company HVAC deficiencies (1980). In each of these cases the NRC, in its investigation determined that the problem was of greater significance than the first reported or that the problem was more generic than identified by Consumers Power Company.
>
> The Region III inspection staff believes problems have kept recurring at Midland for the following reasons: (1) Over-reliance on the architect-engineer, (2) failure to recognize and correct root causes, (3) failure to recognize the significance of isolated events (4) failure to review isolated events for their generic application, and (5) lack of an aggressive quality assurance attitude

In fact, each of the examples given above demonstrates conclusively that CPCo has long since lost control of the Midland Project. To illustrate, although the Diesel Generator Building settlement is quietly tucked into a list of examples of common construction problems at nuclear sites across the country it is far from that. The DGB settlement issue starts with a Material False Statement (see ACRS Interim Report, at 16-17) submitted to the NRC in the FSAR. It continues as one of the most massive construction experiments in the history of construction. Whether or not it is possible to tunnel underneath a nuclear power plant and build a foundation after-the-fact remain a subject of heated debate.

Another example is contained in an in-depth look at the problems of the Zack Company on the Midland site. Not only did the $38,000.00 fine levied in 1980 for CPCo's failure to control a subcontractor not catch the attention of CPCo, it seems to have forced them to extraordinary bumbling. In April of 1982 the Quality Assurance Supervisor of the Zack Company came to Consumers Power Company management with solid evidence of a serious QA/QC breakdown on-going in the Zack headquarters. Not only did CPCo

ignore the serious warnings of the QA/QC supervisor, Mr. Albert Howard, tney did not warn two other utilities receiving suspect material, they did not notify the NRC according to the requirements of 10 C.F.R. Part 21, and they revealed the confidentiality of Mr. Howard who was subsequently dismissed --with his staff--from the Zack Company. Since July 1982 when the Zack employees came to GAP for assistance CPCo has had to lay off unqualified Zack welders, (Exhibit 3), reinspect 100% of the HVAC equipment on the site, and reorganize the Zack QA/QC function again as recently as June 9, 1983 (Exhibit 4). Unfortunately, the reorganization reveals that CPCo has still not caught on to the seriousness of the problems, they have allowed the same supervisor responsible for the Zack problems for the past two year to be promoted to the General Superintendent of Plant Assurance Division of the Midland Project Quality Assurance Department.

Further, since the issuance of the November report the OGB inspection confirms that CPCo continues its tradition of construction mishaps. After 14 years and an estimate of $4.43 billion dollars the Commission has ample bases to take immediate action to ensure that the public health and safety will be adequately protected.

III. SPECIFIC CRITICISMS OF THE CONSTRUCTION COMPLETION PROGRAM[1/]

In the February 8, 1983 analysis of the CCP submitted to the public, the NRC, and CPCo GAP requested that the multiple audits/third-party reviews be combined into one comprehensive independent review. Specifically, the GAP staff took exception to the CCP as being inadequate because it:

(1) relied heavily on and incorporated an INPO-type audit by the Management Analysis Corporation (MAC) which had been rejected by the NRC staff as not independent;

(2) failed to provide any significant details of the methodolog by which either third parties or CPCo would identify problems in the as-built condition of the plant;

(3) was permeated by an inherent conflict-of-interest;

(4) institutionalizes a lack of organzational freedom for the quality assurance/quality control function;

(5) was not comprehensive, and,

(6) failed to specify evaluation criteria and construction procedures that would guarantee quality of construction

1/ The CCP documents incorporated in our analysis include (1)Letters from Mr. J.W. Cook to Mr. J.G. Keppler, NRC, dated Jan.10, 1983, April 6, 1983, April 22, 1983, and June 3, 1983; (2) Letters from Mr. J.G. Keppler to Mr. J.W.Cook, CPCo, dated Dec 30, 1982, March 2 1983; and (3) public meetings with the NRC and CPCo on CCP.

Following the submittal of the original CCP (January 10, 1983) and the February 8, 1983 public meeting in Midland the NRC requested further specific information in their March 28, 1983 letter. The questions from the Regional Staff seek specific details about the scope of the proposed CCP and the methodology of its implementation. CPCo's responses, April 6, 22, and June 3, 1983, provide more details --in some instances explicit details--yet continue to evade or avoid the key questions about the adequacy of the CCP to restore the NRC and the public's confidence in the safety of the Midland plant.

Our analysis of the submittals indicates that CPCo has provided a plan that will meet only the minimum specified requirements of the NRC. The plan remains structurally flawed at the outset. First, it proposes a third party for the audit function that fails a prima facie test for independence, whose competence is questionable given the most charitable review of the past experiences with quality assurance breakdowns, and whose third-party methodology is too superficial to even evaluate. Finally, the proposed auditor, the Stone and Webster construction firm, is suggesting a staff of only nine auditors to provide assurance about the work done by a construction force of over 5,000. (Midland site tour, June 5, 1983)

The NRC administrative staff continues to ignore both the pleadings of the public and the advice of their own technical and inspection staff about the appropriate regulatory action at the Midland plant. The Regional Administrator has blatantly refused to include the public in any serious consideration of the solution to the problems at the Midland site. The continued refusal of the region to asuage the concerns of the public coupled with the intense scrutiny that the Midland plant is receiving from Congress, the press, and local and state government officials is inexcusable.

The ASLB hearings, on going at this time in response to a request from CPCo for a hearing, continue through the laborious process of a judicial hearing. Although the hearing, in theory, will resolve the issue of safety for the central Micigan residents-- in fact,it will be the Staff that controls the critical day-to-day overview of the plant. For this reason GAP is turning directly to the Commission. We have exhausted our efforts to work with the Regional Administration to insure that the CCP is adequate. At the Site Tour Mr. Warnick and Mr. Davis, Region III, confirmed that the CCP would be approved with "10 days to two weeks." With the approval of the CCP safety-related construction activities can commence immediately. It is critical that the Commission review the decision of the Staff and recognize the serious step backwards that this action represents for the third party auditor concept.

A. Modify the Construction Permit to include mandatory "hold points" on the balance-of-plant (BOP) work and incorporate the current Board ordered "hold points" on the soils remedial work into the constructio permit for the Midland Plant, Units #1 and #2.

On April 8, 1981 Region III management overruled its investigative staff's recommendations to suspend construction at the William H. Zimmer Nuclear Power Station near Cincinnati, Ohio. Instead, the NRC issued an Immediate Action Letter which, inter alia, required the Cincinnati Gas and Electric Company to develop a Quality Confirmation Program (QCP). On November 12, 1982 the utter failure of the QCP forced the Commissioners to suspend all safety-related construction at Zimmer. Unfortunately CPCo's Construction Completion Plan (CCP) proposed for Midland bears a striking resemblance to the key flaws that doomed the QCP. In some cases, the CCP exacerbates the mainful mistakes of Zimmer.

More specifically, the Construction Completion Plan is doomed to failure if the following specific problems are not resolved prior to the resumption of construction on the site.[1/]

1. Inherent Conflict of Interest

The foundation of the CCP is to complete "integration of Bechtel QC functions into the Midland Project Quality Assurance Department (MPQAD) under Consumers Power Company management..." (CCP Executive Summary, 1-10-83, at 3.) That has been completed according to the 6-3-83 CPCo letter to the NRC, at 17.

If the CCP adequately recognized that it is the MPQAD management that has failed to supervise and control the Engineer/Contractor throughout the life of the Midland Project perhaps the CCP would have a chance to resolve the quality problems. But the "QA/QC Organization Changes" outlined in part 3.0 of the 6-3-83 submittal simply legitimizes the very structu that has failed to implement the past QA/QC reorganization plans.

As stated on Page 11 of Part 3.0 of the 6-3-83 CCP it is the MPQAD Executive Manager who holds the key contact position with Bechtel QA/QC personnel. This individual, Mr. Roy Wells, confirmed that the burden of change for the Midland Plant was on his shoulders at the February 8, 1983 public meeting. He maintained that it was his persona decision to not replace the top Bechtel QC personnel underneath his supervision, even in the face of direct NRC requests and public skepticism. If there was any doubt that MPQAD intended to bring in new personnel to change the Midland Project around it is dispelled under the "Objectives" of the QA/QC Reorganization:

> 3. Use qualified personnel from existing QA and QC departments and contractors to staff key positions throughout the integrated organization. (6-3-83, at 11)

1/ All safety-related work was halted by CPCo on December 3, 1982 following the results of the NRC OSC inspection of the DGB. That "stop work" remains in effect for safety-related construction except the soils work, HVAC, NSSS and electrical cables. (CCP letters)

2. Failure to Specify Inspection Procedures and Evaluation Criteria

The original proposal (1-10-83, at 8-9, 12) promised to develop and revise the procedures that will be used to conduct the reinspections. Neither the procedures nor the evaluation criteria for the inspections were specified beyond vague reference to professional codes. According to the 6-3-83 proposal the QA/QC Reorganization still failes to include or explain the critical Quality Control inspection plans, (6-3-83, at 12).

The technical content and requirements of such plans are promised at some undisclosed future time, although QC will be responsible for implementing these unknown, unexplained methodologies which hold the key to future quality at the Midland plant. (6-3-83, at 12)

MPQAD even plans to continue to use Bechtel's Quality Control Notices Manual (QCNM) and Quality Assurance Manual (BQAM) "as approved for use on the Midland Plant." (6-3-83, at 12) The solution may be convenient, but it fails to explain how a QA/QC system that produced the In-Process Inspection Notification (IPIN) and Deficiency Report (DR) system could be adequate for a new Midland commitment to quality.

As recently as May 27, 1983 the first monthly report of the TERA Corporation that is conducting the Independent Design and Construction Verification (IDCV) program discovered yet another Quality Control process that has failed. Confirmed Item report Number C-031 (Attached as Exhibit 5) reports the signifcance of their finding that four hangers field measured by TERA were out of installation tolerence limits. The report states simply:

> The construction deviation control process is not functional.

Other TERA confirmed items include hangers installed three feet from its design location (C-032 and C-033), spring hangers located the wrong side of a 90° elbow, construction deviaition information not forwarded for approval and processing by engineering as required by procedures (C-034), hangers at elevations which do not match design elevations (C-035), offset dimensions, and drawings that have been signed but not checked (C-036), serious FSAR errors that "could lead to the utilization of improper input to the design process." (C-037), improper power supply to the AFW pump which could result in "(f)ailure to provide minimum flow " and could cause damage to the AFW turbine driven pump during the station blackout (C-038). In all TERA reported 46 confirmed items. 1/

1/ TERA's monthly summaries contain Open, Confirmed and Resolved(OCR) Item reports, Finding Reports and Finding Resolution Reports. Confirme items will be further reviewed and either dispositioned or reported closed or tracked.

The TERA IDCV plan is not a part of the CCP activities. However, the examples stated above clearly indicate that there is a strong need for a comprehensive inspection of the plant according to specified and defined procedures.

In Section 4.0 "Program Planning," the Procedure for Control and Release of New Work exemplifies the lack of information given to the NRC and the public to judge the adequacy of the CCP. Although Section 4.5.3 (named above) allegedly provides the basis for ensuring that the requirements of the CCP are met prior to initiation of new work, in reality these procedures are in something called the Construction Work Plans(CWPs). The CWPs will not be developed until after a list is prepared or the Phase I activities are carried out. In other words the CCP will make up the answers as it goes along--because no one, particularly CPCo and Bechtel, know the questions yet.

Similar to the CWPs are the Quality Work Plans (QWPs) which will be written to match the CWPs. The CWP/QWP packages obviously will provide the critical guidance to construction and quality control personnel. Any variation on the CCP simply must contain NRC inspection "hold points" to review the CWP/QWP packages prior to the initiation of any Phase Two work on the site.

The "hold point" requested above between completion of Phase I and Phase II activities is consistent with the commitments made by Mr. Keppler to the Midland public at the February 8, 1983 public meeting during which he commited to taking a "hard look at the Midland Project." (Public Meeting, February 8, 1983, Midland, Michigan)

3. Program Implementation Weaknesses

Historically it has been the implementation of any QA/QC program that has been CPCo's Achilles heel at the Midland Plant. Similarily it is the implementation of the current edition of the CCP that concerns GAP staff working on the Midland project.

In Section 5.0 Program Implementation the key solution apparently is the management involvement at every stage of implementation activities. As we have previously stated we believe that this management influence will render the CCP ineffective, regardless of the commitment of construction personnel.

Section 5.0 calls for a management review prior to the initiation of team activities for Phase 1 work. This review will, of necessity, review training and recertification of QA/QC employees. They will also "cover the process for both (1) the verification of completed inspection activity and (2) the installation and inspection status activity.

GAP believes that these reviews are critical to the credibility of

the safety of the construction on the Midland site. We request that a NRC "hold point" and a third party "hold point" be incorporate at the Management Review stage prior to the beginning of any Phase 1 work.

Installation of a "hold point" at this juncture would require that the Management Release discussed on page 27 as Section 5.3 would be a responsibility transferred to the third-party team, with NRC review and approval.

Under Phase 2 Implementation the following statement raises serious concern about the CPCo commitment to following its own professed work plan:

> Correction of identified problems will be given priority over initiation of new work, as appropriate, and the completion teams will schedule their work based on these priorities, (emphasis added).

There is no discussion of who will decide what is and what is not appropriate to correct before new work is started, nor how that determination will be made. Those critical decisions simply must be made by someone other than CPCo and their Bechtel Engineer/ Contractor.

Finally, GAP takes exception to the "catch all" provided for in the CCP. Section 10.0, CHANGES TO THE CONSTRUCTION COMPLETION PROGRAM provides a procedure which could undermine the entire CCP. If CPCo follows its historical path of disguising all unauthorized work as a "misunderstanding" or "lack of clear communication," than this Section provides a legitimate channel for "obtaining approval to initiate activities that do not meet the requirements of the CCP."

4. Lack of Organizational Freedom for the Quality Assurance Departme

The organizational premise of the CCP is a "team" concept that integr construction, engineering and quality assurance personnel. The "team members will be located together to the extent practicable..." (1-10- at 8) The NRC recognized the lack of organizational freedom in the March 28, 1983 letter from Region III to CPCo. (3-28-83, at 1), and asked CPCo to provide a description the measures the utility inte to institute to "assure that QC reinspection will be sufficiently independent of team controls."

CPCo's response as documented in their April 22, 1983 letter on Page 7 indicates that QC personnel assigned to the teams will be under the Administrative controls of MPQAD. It states that actual QC inspections will be conducted in accordance with the PCQIs and IRs approved by MPQAD. Further explanation is provided in the 6-3-83 CCP, Section 4.0, PROGRAM PLANNING and 4.2 TEAM ORGANIZATION. These sections detail both team organization and training/recertifica

Many of the details concerning retraining and recertification appear to be not only adequate, but surpass the commitments made by other utilities with similar problem. In particular GAP believes that if implemented as planned, and reviewed at a Phase I retraining "hold point" the training process will produce construction and quality control personnel with sufficient skills to perform their jobs.

However, even the best trained work force must still have supervisors who are commited to quality work instead of cost and schedule pressures. To date MPQAD has demonstrated neither the ability to implement any quality plan, nor the commitment to do so.

GAP reserves judgement on the operation on the "team concept" as an appropriate construction concept for nuclear power plants until such time as a utility can demonstrate that there can be organizational freedom for QA functions.

5. Lack of Comprehensiveness

CCP reinspections will cover only "accessible" completed construction, (1-10-83, at 10; 4-22-83, at 1; and 6-3-83, at 21). The Regional staff has indicated that this is acceptable to them. (3-28-83 letter, at 1) Although there is no indication in any of the submittals of the percentage of work that is not accessible Section 4.3 Quality Verification (6-3-83, at 21-22) majority of the work performed prior to December 1982.

Further the CCP continues to define out from CCP coverage the soils work, the HVAC work, the electrical cable reinspection, the NSSS work, and other problem areas that have required individual programs to resolve deficiencies.

This piecemeal approach effectively surrenders any pretentions that the CCP will provide a definitive answer to the Midland QA problems, even if the program were otherwise legitimate. The necessity for reinspection results from the inaccuracy of current quality records in the first place. Paperwork reviews are simply not dependable at the Midland Project.

It is critical that either a third party or NRC "hold point" be contained in the reinspection Phase I activities to determine the adequacy of the "accesible systems" approach. Clearly if reinspections find items of non-conformance the inspection scope needs to be increased to include both Non-Destructive Examination techniques as well as other means available to the utility to determine the as-built condition of the plant.

The STATISTICAL SAMPLING PLAN, Appendix C, Rev.1 of the 6-3-83 CCP is being reviewed by a industrial statistician at this time. The initial review of the sampling plan indicates that it is consistent with appropriate sampling techniques. We also request

that Mr. Rubenstein of the Office of Nuclear Reactor Regulations (NRR) review this plan for acceptability prior to NRC approval.

6. The CCP fails to require the minimum of a credible reinspection of the as-built condition of the plant.

At the February 8, 1983 public meeting Mr. Keppler said that the NRC "told them that comprehensive programs needed to be developed and put into place in order to: (1) Provide assurance that completed construction work was sound, and (2) Provide assurance that future work would be effectively controlled." (Opening Remarks, Mr. Keppler, attached as Exhibit 6)

Evidently Region III's assurance will come from CPCo's own audit of the plant. Since February GAP staff members have tried every reasonable approach to convince Region III that their philosophical view of industry self-examination has failed at Midland. Although Mr. Keppler boldly maintains that his "reasonable assurance" of the Midland plant can only now be maintained with adequate third -party reviews, in fact, the third party review amounts to nine professionals overviewing the work of over 5,000 construction employees.

The meat of the reinspection program is the Quality Verification Program. This Program is explained in detail in Appendix I of the 6-3-83 CCP submittal. Our analysis is on going, however, there are a number of obvious flaws. These include, but are not limited to:

--Exclusion of 31,890 questionable closed Inspection Records (IRs) for HVAC and soils work, Cable routing and identification and ASME hanger programs,(App I, at 7),

--Incomplete review by the NRC of the PQCI's to be used for reinspection,(App I at8),

--Non-compliance with the 100% reinspection request (3-38-83 letter from RIII to CPCo, at 1), substituting a 100% reinspection effort based on a "systems/area orientation," and supplemented by a "random plant-wide inspection" to provide a valid quality baseline on an expeditious basis. (In other words manipulate the requirement to get beyond the 100% hardware inspection as quickly as possible.),

--Exemptions for rebar, components, and other materials that are inaccessible but indeterminate because of materials traceability problems. (App I, at 13)

--Excessive responsiblity for the Executive Manager of MPQAD to have overall responsibility for the QVP, (App I, at 16),

--Critical PQCIs to be verified by Review of documentation only Appendix B.

Clearly the CCP is not adequate to assure public health and safety in central Michigan. Installation of mandatory "hold points" to review the training and recertification of personnel, the adequacy of the PQCIs, and the appropriateness to proceed from Phase I to Phase II in this massive project is called for.

GAP urges the Commissioners to review the materials which comprise the CCP and critically consider the extraordinary requirements that will bring the Midland project into conformance with 10 CFR.

B. Require a management audit of Consumers Power Company (CPCo) by an independent, competent management auditing firm that will determine the causes of the management failures that have resulted in the soils settlement disaster and the recent Quality Assurance breakdown.

Even if the methodology of the reinspection program and the installation of mandatory "hold points" in the balance of plant work and soils work were adequate it is impossible to have any faith in the current Midland management team. These are the same people responsible for the problems in the first place!

The evidence on the public record is clear -- the corporate management of the Midland project simply cannot build a nuclear power plant according to the laws of the Atomic Energy Act as outlined in the Code of Federal Regulations, Part 10. Our conclusion is based on the testimony of NRC staff inspectors, investigators, technical experts internal sources as well as the attitude and actions of CPCo management officials. For 14 year CPCo has bumbled from one extraordinary breakdown to another, and they have continued a pattern of blaming their woes on the NRC, the intervenors, the State Attorney General, and hard times. CPCo has lacked the initiative to make adequate modifications to their construction boondoggle, to recognize the most obvious problems, and to resist regulatory incentives to improve.

In testimony before the Atomic Safety and Licensing Board (ASLB or Board) NRC inspectors testified that they still do not know the cause of the problems at the Midland site. (Exhibit 7) Recently, however, one inspector testified that he believed the plant would "run a lot easier without them (CPCo officials) there." (Exhibit 8)

Similarily memos written to Regional Administrator Keppler during the summer of 1982 give significant insight into the reasons for the problems at the Midland site. (Contained as Exhibit 9). These memos include insight into the technical inadequacies, communication breakdowns, and staff recommendations about solution to the problems on the site. Several examples of these types of comments are listed below:

--On April 27,1983 Dr. Ross Landsman, OSC-RIII, testified before

the ASLB that he did not trust CPCo because there were too many examples of them putting "cost and scheduling ahead of quality." (Exhibit 10).

--On May 6, 1983 Mr. Wayne Shaffer, OSC-RIII, former head of the the OSC-Midland Section said that he didn't have any faith in CPCo ability. (Exhibit 11)

--On June 1, 1983 Dr. Landsman testified that MPQAD Executive Manager, Mr. Roy Wells; Superintendent of MPQAD soils work, Jim Meisenheimer; and the Section Head for the Soils QA work, Dick Oliver should be replaced because they are unqualified or have attitude problems. (Exhibit 8)

--In a June 21, 1982 memo from Mr. Charles Norellius and Mr. Spessard stated the following about Mr. James W. Cook, the CPCo Vice-President in charge of the Midland Project:

> (He) may actually be contributing to some of the confusion which seems to exist. The staff views that he is too much involved in details of plant operations and there are times when the working level staff appear to agree and be ready to take action where Mr. Cook may argue details as to the necessity for such action or may argue as to the specific meaning of detailed work procedures,..."

--The Norellius/Spessard memo further suggests that the NRC "should question whether or not it is possible to adequately manage a construction program which is as complex and diverse as that which currently exists at Midland."

--Finally the same memo questions whether the NRC should consider that CPCo "have a separate management group all the way to a possible new Vice-President level, one of which would manage the construction of the reactor to get it operational and the second to look solely after the remedial soils and underpinning activities.

--An NRC July 23,83 memorandum from R.J. Cook to R.F. Warnick states that CPCo has a history of not responding to NRC concerns, giving misleading statements to the NRC, not having control of their contractor, continuous deficiencies in material storage conditions, a practice of inspecting -rather than building- quality into the plant, slipshod workmanship, an attitude which precludes quality workmanship, and an unwillingness of the constructor to share information with the NRC. (Exhibit 9).

--The Cook memo further states that CPCo uses "tunnel vision," in the identification of problems, has a gag order on their employees to prevent them from talking to the NRC, and remains "argumentative" toward the NRC when they must discuss regulatory concerns.

The Cook memo concludes with the following insight:

> When considering the above listing of questionable licensee performance attributes, the most damning concept is the fact that the NRC inspection effort at Midland has been purely reactive in nature for approximately the last year, and that the indicators are what have been observed in approximately the last six months. If these are the types of items that have become an NRC nuisance under a reactive inspection program, one can only wonder at what would be disclosed under a rigorous routine inspection and audit program.

Clearly the problems on the site warranted aggressive management attention. Yet evidence obtained by GAP under the Freedom of Information Act demonstrates tha the solutions to Midlands' problems have consistently had to be initiated, developed and structured by the NRC in a series of painful regulatory negotiations. Just as CPCo cannot "inspect quality into the Midland plant," the NRC cannot regulate integrity into CPCo management. Both quality construction and competent, trustworthy management depend on a basic respect for voluntary disclosure of quality control or assurance problems.

It is perhaps easier to understand the lack of candor on the part of the CPCo Midland management team after reviewing the statements of CPCo President John Selby in recent news articles. In particular GAP brings to the attention of the Commissioners a recent Detroit News article (April __,83) in which Mr. Selby admits that they "have bet the company on the Midland plant."

His statement, coupled with the actions of his top-level management, is one explanation of the panic management that permeates the Midland project. It is Mr. Keppler's view, as expressed during his ASLB testimony, that if CPCo can't build Midland he would have to pull their operating license for Big Rock and Palisades. We disagree with his conclusion--Palisades and Big Rock are plants that are already in the rate base, Midland is not. Its' $4.43 billion dollar price tag, and questionable completion date have almost destroyed the company. Common sense can explain the lack of confidence that has developed as a result of the conflicting pressures of cost/scheduling and safety at the Midland site

Yet Mr. Keppler maintains that neither he nor his staff have yet discovered the reason for Midland's management problems. Since May 1982 the Regional Director has been looking for an answer. At this point GAP believes that the answer is clearly evident in the testimony of his own inspectors. The root causes for the management breakdown can be best discovered at this point by an independent management audit that has the authority to recommend solutions to poor judgement and colossal cost overruns as well as construction flaws unlike any other nuclear construction project.

C. Reject the CCP as currently proposed, including a rejection of Stone and Webster to conduct the third party audit of the plant. Instead a truly competent, credible, and independent third party auditor should be chosen with public participation in the process.

To date the NRC has announced that there will be no response to public concerns about CPCo's selection of S&W as the third party auditor. Nor will there be an opportunity to review the methodology by which S&W is to preform its function. Instead, according to an April 5, 1983 letter from Mr. Keppler to Billie Garde, the S&W work will be looked at only after a problem is found:

> We have not reviewed S&W methodologies and do not plan to unless we find significant problems which they have missed. (Exhibit 12, at 3.)

The letter confirms that there will be no public meeting to consider public comments about either S&W or to review the adequacy of their plan. This continues the long history of regulation by default at Midland. Unfortunately for the public this theoretical approach to governmental regulation is both dangerous and expensive. At this stage Region III is as guilty as CPCo in a serious conceptual breakdown that prohibits implementaion of any realistic solution to Midland's problems.

These problems are at least as serious as Diablo Canyon and Zimmer. They touch on every area of design and construction. For almost 14 years there has been a total lack of commitment to a QA program which has left the plant 85% complete in an indeterminate state. The long trail of continuing revelations, potential safety problems, hardware problems, design flaws, major construction defects, astronomical price increases, and broken promises have totally eroded the public confidence in CPCo and in the NRC to ensure the quality of the plant's construction.

Only a truly independent, comprehensive audit will assuage the public's well-founded fears that Midland is not safely constructed.

1. Evaluation of the Stone and Webster Proposal

The concerns about S&W's independence would be somewhat academic if S&W had presented a minimally adequate audit proposal to address the scope of the QA breakdown. But it didn't. Although the plan is too sketchy to evaluate -- a brief 3 page outline --the number of personnel planned for the audit removes any doubt about credibility or dependability. S&W proposes nine auditors for the Midland project!

At a minimum, the NRC should recognize that any CCP must be based on the results of completed third-party findings, as well as commitment for the duration of the project. The third party program must provide a comprehensive view of the as built condition of the plant by an independent auditor, as well as an independent assessment of all future construction -- the CPCo CCP and S&W plan do not do either

The only truly substantive part of the Stone and Webster audit is the Construction Implementation Overview (CIO), described in the 6-3-83 submittal at 30. Like the soils audit the S&W program commits to stay only until CPCo and the NRC have confidence in the adequacy of the implementation of the QA Program for the Midland plant. This is not a third party audit by any stretch of the imagination.

2. Lack of Independence

Midland needs, and the Region has commited to a verification program by a truly independent company with no stake in the outcome of its audit. This independent third party is not serving a client's requirements, but rather the public interest in ensuring the quality of construction at the plant.

Stone and Webster fails under both a literal and realistic reading of the Commission's primary financial criteria, that the third party not have any direct previous involvement with the Company. S&W directly fails this test. In September 1982 S&W was hired by CPCo to be the overviewer on the soils QA implementation. If the Commissions independence criteria are to be taken seriously they must be applied.

Ironically, it is the independence criteria that NRR uses as a basis to reject the other CPCo nomination, the TERA Corporation (see March 28, 1983 letter from NRC to CPCo, at 3).

3. Lack of Public Participation in the Selection Process

Even if the independence criteria could be met for S&W the lack of public participation in the selection process destroys its legitimacy.

Although the February 8, 1983 meeting attracted several hundred Midland residents there was no discussion or input from the public about the third party auditor, or the methodology by which the audit would be conducted. Instead Mr. Keppler and Mr. Eisenhut firmly informed the public that an independent audit would determine the adequacy of the Midland plant. Within days the NRC and CPCo were in "closed door" sessions over the acceptability of the CCP, the auditor, and the various scopes and methodologies.

Unless Mr. Keppler and the Commission have rewritten the policies of the agency the Diablo Canyon model set the basis for increased public participation in resolving the issues of how the Commission chooses independent auditors.

At Midland, by contrast, Region III has chosed to ignore the seriousness of the situation by eliminating many of the most useful means of public participation employed at Diablo Canyon. When GAP protested the series of "closed door" meetings pertaining to the independent audit we were told that there would be no public meetings about S&W, but that all written comments would be considered (Exhibit 12,

at 3). Instead of the NRC acting to allay the fears of the public Mr. Keppler's position of "resisting shared decision making" (Exhibit 13) has only served to reinforce the fears of an already skeptical public in central Michigan.

Stone and Webster may be capable of addressing the problems at Midland, but neither S&W nor CPCo have bothered to acknowledge that importance of public credibility for the third party auditor. S&W's selection would completely undermine the NRC's reform action for Midland.

D. Remove the Quality Assurance/Quality Control Function from the Midland Project Quality Assurance Department (MPQAD) and replace them with an independent team of QA/QC personnel that report simultaneously to the NRC and CPCo.

A licensee's quality assurance program is its internal structure of checks and balances to ensure safe operations. Every applicant for a construction permit is required by the provisions of 10 C.F.R. S50.34 to include in its preliminary safety analysis report a description of the quality assurance program to be applied to the design, fabrication, construction and testing of the structures, systems and components of the facility. Quality assurance comprises all those planned and systematic actions necessary to provide adequate confidence that a structure, system or component will perform satisfactorily in service. Each structure, system or component must be documented, inspected and periodically audited to verify compliance with all aspects of the quality assurance program. The cause of the safety defects described above is an inadequate quality assurance program, which has been in shambles for a decade. In fact, in 1973 the original Midland licensing appeal board members felt so strongly about QA violations that the Director of Regulations pointed out that even though the Appeals Board could not take action on the IE findings--

> (H)ad the construction permit proceeding still been before our Board at the time that the results of the November 6-8 inspection were announced, it is a virtual certainty that we would have ordered forthwith a cessation of all construction activities....

(November 26, 1973 Letter from L. Manning Muntzing, Director of Regulations, re: Quality Assurance Deficiencies Encountered at Midland Facility, p.2.)

The 1973 warning should have served as notice to both Bechtel and

and Consumers Power Company to resolve their QA problems. Quite the contrary, however, they ignored the notice. So did the NRC staff. The problems at the Midland plant have continued unabated.

Both the 1979 and 1980 Systemic Assessment of Licensee Performance (SALP) reports give notice of futher and expanded problems at Midland. The problems identified then (lack of qualifications of QC inspectors, continuation of work prior to corrective action) are similar to those cited as causes in the recent stop-work order. The reports also include acknowledgements of excessive QA backlogs and lack of timeliness. (SALP Report 1980.) Consumers' failure to learn from its mistakes passed the stage of accidental oversight long ago.

The lack of quality assurance at Midland has been a continuous concern to Region III. In the spring of 1982 at the release of the 1981 SALP rating, Mr. Keppler publicly reported that it was necessary to change previous testimony before the ASLB which had provided a"reasonable assurance" that the plant would be constructed in accordance with nuclear construction regulations. The revised testimony was not modified substantially, it is clear that QA problems at Midland were resolved.

According to testimony by the NRC staff as early as September 1982 the Midland special section was so concerned about the problems of QA implementation that at least one of them recommended stopping work at the Midland facility. Subsequently the Diesel Generator Building inspection confirmed that in fact, there had been a quality assurance breakdown on the site. The solution to resolving the QA breakdown is the CCP.

Unfortunately the Region III management seems satisfied with the basis upon which the CCP is developed: put Consumers in charge of the program.

The public already has had an opportunity to preview the results of Consumers' internal policy with the Zack debacle over the past three years. Its performance has been disappointing, at most.

Although the NRC fined CPCo $38,000 for Zack's non-compliance with federal regulations and forced a major QA reorganization, further actions by the utility revealed a determination to hide problems. Currently an Office of Investigations probe is being conducted into the most recent Zack problems. The findings of the probe are already documented in the NRC inspections of the Zack QA breakdown at the LaSalle Plant. A December 22, 1982 NRC IE report about the revelations acknowledges the critical role that CPCo played in response to the 1979 citation:

> On September 2, 1981, the services of a Senior Quality Assurance Engineer from Project Assistance Corporation (consultants) were retained by CPCo for assignment at Zack for the purposes of establishing a formal document

control system and performing an indepth review of the conditions described by Zack in their September letter (Zack notified CPCo of a 10 CFR 50.55(e) on August 28, 1981).

CPCo MPQAD employees and management knew about the new QA breakdown on the Midland site, yet they failed to notify the NRC or take any other action.

LIkewise, the infamous soils settlement problems, began with pre-notification to the Midland management team through the settlement of the Administration building in 1977. That settlement ocurred a year prior to the beginning of construction of the Diesel Generator Building. That building is now cracked and sinking. The technical debate over the building itself and and its ultimate safety remains little more than a judgement call between experts.

Finally, the a recently released NRC Investigation (83-13) into the possible "false statement" of CPCo management official Mr. Boos concerning the status of work completed on the site during a 1982 NRC meeting shatters any doubts that CPCo is a utility that seeks to be candid and open with the regulators.

Recent testimony into the 83-13 Investigation report led to an "in camera" session after an NRC IE Inspector acknowledged that at least one CPCo official at the March 82 meeting knew that the NRC had been seriously misled. (Exhibit 13)

These examples of the utility's resposne to the discovery of any major problems completely undermine the assumption upon which the CCP is based -- voluntary disclosure of QA violations.

Clearly a completion and reinspection program that places faith in a management team that has lost the confidence and trust of NRC inspectors, and a QA Department that has notoriously and blatantly disregarded 10 CFR Appendix B, is inappropriate.

Only a new QA/QC team, with no stake in the outcome of their work, can ever restore quality work to the Midland facility. GAP recognizes this is an extraordinary request for relief, but it is clearly warranted at the Midland Project. After 14 years of bumbling and $4.43 billion dollars of construction cost there must be a time when the Commissioners intervene to protect the public affected by this out-of-control project. The Region and the utility have stopped short of realistic regulation, and appropriate controls for the remainder of the construction phase. Hopefully, the Commissioners will intervene.

E. Increase the assignment of NRC personnel to include additional technical and inspection personnel.

Region III is currently understaffed and critically overworked.

The new Office of Special Cases is handling two of the most troubled nuclear plants under construction in the country. The intense inspection effort has provided the only acceptable solution to both the Zimmer and Midland crisis. The teams of NRC Inspectors assigned to the Office of Special Cases has been, for the most part, of high quality and extremely conscientious. They have requested, through memorandum and testimony the assignment of additional personnel to assist on the Midland project. We strongly support the assignment of additional technical and inspection personnel to the Region to augment the OSC teams.

F. Require a detailed review of the soils settlement resolution, as outlined in the Supplemental Safety Evaluation Report, incorporating a technical analysis of the implementation of the underpinning at the current stage of completion.

As a further structural check on the independence and performance of the third-party program at Diablo Canyon, in 1982 the NRC staff commissioned Brookhaven National Laboratory ("BNL") to study particular aspects of the seismic design of the plant. BNL raised questions about many of the mathematical models used by PG&E to determine the seismic design response spectra for the plant. The BNL study revealed that the Teledyne audit was not complete and comprehensive "enough" and that broad access to the audit process by outside consultants can significantly enhance the value and credibility of the third-party review process.

In light of the concerns by a number of the technical disagreements of several NRC staff members, GAP believes it appropriate for the NRC commissioners to request another study of the design deficiencies of the Midland nuclear power plant. In particular we request another review of the Diesel Generator Building by a non-nuclear construction consultant.

If these basic questions cannot be answered then no matter what the numerous third party auditors do to restore confidence in the balance of the plant the residents of central Michigan will never know whose technical judgement was correct.

IV. CONCLUSIONS

In the fall of 1982 an NRR staff person recorded(in a log recently obtained by GAP through FOIA requests)the following summary of the ACRS request-formalized through their June 8, 1982 letter to Chairman Palladino; and NRR management response.

> The ACRS asked for a report of design quality and construction adequacy. They are looking for assurance that with all the QA problems at Midland in specific areas that we have not overlooked problems in other areas that have not yet reared their head. Is CPCo addressing this only through the AFW review?

But the INPO effort addresses "work in progress" only!

BUT WHEN INTEGRATED WITH TERA EFFORT, YOU GET _____(undecipherable)

Only for the AFW system!

SERVES AS A "SAMPLE" (AUDIT)

But it doesn't answer Oakrent's problem with hidden problems. INPO goes from today and does only address forward fit. They do not investigate what happened previously.

TERA LOOKS BACKWARD TOO.

But only for the AFW system! (We've come full circle). Exhibit 14, at 5.

Dr. Oakrent's problem with hidden problems is the same as GAP's concern about hidden problems. In the past year both CPCo and the NRC have managed to avoid the key question about the Midland Plant -- What is really out there? Until that question is answered completely, competently, and credibly there can be no assurance about the safety of the Midland plant.

We urge the Commissioners torequest a management audit of CPCo; to replace MPQAD with an independent firm; to install "hold points" in the construction permit, and to require all the necessary changes to the proposed Construction Completion Plan which will enable the public to know the facts about the cost and safety of the Midland plant.

Like Zimmer, the traditional approach of licensee control at Midland can be accomplished only at the expense of undue risks to public health and safety. We trust that the ASLB will reach a fair and just decision about the Midland Plant when it reviews the long record that has been established by Citizen Intervenors, the Staff, and the utility. But, the approval of the CCP without substantial modification will have the effect of allowing CPCo to continue its long out-of-control nuclear plant virtually independent of the third-party audit that the central Michigan public expects to be established.

We look forward to your prompt response.

Sincerely,

Billie Pirner Garde

BILLIE PIRNER GARDE
Citizens Clinic Director

cc: Service List

BPG/dk

DOCKETED

'83 JUN 13 P4:34

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing June 13, 1983 GAP letter to NRC Commissioners, re: Construction Completion Plan were mailed, proper postage prepaid, this 13 day of June, 1983, to:

*Charles Bechhoefer, Esq.
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

*Dr. Jerry Harbour
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. Frederick P. Cowan
Administrative Judge
6152 N. Verde Trail, Apt. B-125
Boca Raton, Florida 33433

James E. Brunner, Esq.
Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201

Frank J. Kelley
Attorney General State of Michigan
Steward H. Freeman
Assistant Attorney General
Environmental Protection Division
525 W. Ottawa Street, 720 Law Building
Lansing, Michigan 48913

Ms. Mary Sinclair
5711 Summerset Street
Midland, Michigan 48640

Ms. Barbara Stamiris
5795 N. River
Freeland, Michigan 48623

Wendell H. Marshall, President
Mapleton Intervenors
RFD 10
Midland, Michigan 48640

*Docketing and Service Section
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Myron M. Cherry, P.C.
Peter Flynn, P.C.
Cherry & Flynn
Three First National Plaza
Suite 3700
Chicago, Illinois 60602

*Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

*Atomic Safety and Licensing
Appeal Panel
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Steve J. Gadler, P.C.
2120 Carter Avenue
St. Paul, MN 55108

Frederick C. Williams, Esq.
Isham, Lincoln & Beale
1120 Connecticut Avenue, N.W.
Washington, D.C. 20036

*William D. Paton, Esquire
Office of Executive Legal Director
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Bill Pinkard

*Delivered through the NRC internal mails.

Attachment #1

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

May 24, 1983

Docket Nos. 50-329 OM,OL
50-330 OM,OL

MEMORANDUM FOR: The Atomic Safety and Licensing Board for the Midland Plant, Units 1 and 2

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

SUBJECT: VIOLATION OF HOLD TAG DURING REMEDIAL UNDERPINNING CONSTRUCTION (Board Notification BN #83-70)

In accordance with NRC procedures regarding Board Notifications, the enclosed memorandum is being provided for your information as material and relevant to quality assurance issues before the Board in the OM-OL hearing. The information concerns continued construction activities on underpinning pier KC-2 located beneath the north-east portion of the Turbine Building despite the existence of a nonconformance report and hold tag. The NRC is reviewing this matter with respect to the effectiveness of existing procedures to control quality.

Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

Dupl of 8406040335

MIDLAND (For BNs)

Mr. J. W. Cook
Vice President
Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

cc: Stewart H. Freeman
Assistant Attorney General
State of Michigan Enviornmental
Protection Division
720 Law Building
Lansing, Michigan 48913

Mr. Roger W. Huston
Suite 220
7910 Woodmont Avenue
Bethesda, Maryland 20814

Mr. R. B. Borsum
Nuclear Power Generation Division
Babcock & Wilcox
7910 Woodmont Avenue, Suite 220
Bethesda, Maryland 20814

Mr. Don van Farrowe, Chief
Division of Radiological Health
Department of Public Health
P.O. Box 33035
Lansing, Michigan 48909

U.S. Nuclear Regulatory Commission
Resident Inspectors Office
Route 7
Midland, Michigan 48640

Mr. Paul A. Perry, Secretary
Consumers Power Company
212 W. Michigan Avenue
Jackson, Michigan 49201

Mr. Walt Apley
c/o Mr. Max Clausen
Battelle Pacific North West Labs (PNWL)
Battelle Blvd.
SIGMA IV Building
Richland, Washington 99352

Mr. I. Charak, Manager
NRC Assistance Project
Argonne National Laboratory
9700 South Cass Avenue
Argonne, Illinois 60439

James G. Keppler, Regional Administrator
U.S. Nuclear Regulatory Commission,
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Mr. Ron Callen
Michigan Public Service Commission
6545 Mercantile Way
P.O. Box 30221
Lansing, Michigan 48909

Mr. Paul Rau
Midland Daily News
124 McDonald Street
Midland, Michigan 48640

Billie Pirner Garde
Director, Citizens Clinic
for Accountable Government
Government Accountability Project
Institute for Policy Studies
1901 Que Street, N.W.
Washington, D. C. 20009

Commander, Naval Surface Weapons Center
ATTN: P. C. Huang
White Oak
Silver Spring, Maryland 20910

Mr. L. J. Auge, Manager
Facility Design Engineering
Energy Technology Engineering Center
P.O. Box 1449
Canoga Park, California 91304

Mr. Neil Gehring
U.S. Corps of Engineers
NCEED - T
7th Floor
477 Michigan Avenue
Detroit, Michigan 48226

Geotechnical Engineers, Inc.
ATTN: Dr. Steve J. Poulos
1017 Main Street
Winchester, Massachusetts 01890

DISTRIBUTION LIST FOR BOARD NOTIFICATION

Midland Units 1&2,
Docket Nos. 50-329/330

Charles Bechhoefer, Esq.
Ms. Lynne Bernabei
James E. Brunner, Esq.
Dr. John H. Buck
Myron M. Cherry, P.C.
Dr. Frederick P. Cowan
T. J. Creswell
Steve J. Galder, P.E.
Dr. Jerry Harbour
Mr. Wayne Hearn
Mr. James R. Kates
Frank J. Kelley, Esq.
Christine N. Kohl, Esq.
Mr. Wendell H. Marshall
Michael I. Miller, Esq.
Thomas S. Moore, Esq.
Mr. Paul Rau
Ms. Mary Sinclair
Ms. Barbara Stamiris
Frederick C. Williams, Esq.

Atomic Safety and Licensing
Board Panel
Atomic Safety and Licensing
Appeal Panel
Docketing and Service Section
Document Management Branch

ACRS Members

Dr. Robert C. Axtmann
Mr. Myer Bender
Dr. Max W. Carbon
Mr. Jesse C. Ebersole
Mr. Harold Etherington
Dr. William Kerr
Dr. Harold W. Lewis
Dr. J. Carson Mark
Mr. William M. Mathis
Dr. Dade W. Moeller
Dr. Milton S. Plesset
Mr. Jeremiah J. Ray
Dr. David Okrent
Dr. Paul C. Shewmon
Dr. Chester P. Siess
Mr. David A. Ward

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

MAY 1 3 1983

MEMORANDUM FOR: D. G. Eisenhut, Director, Division of Licensing, NRR

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

SUBJECT: RECOMMENDATION FOR NOTIFICATION OF LICENSING BOARD

In accordance with present NRC procedures regarding Board Notifications, the following information is being provided as constituting new information relevant and material to the Midland OM/OL proceedings. This information deals with the licensee's May 9, 1983 decision to stop Remedial Soils work due to violations of applied Hold Tag requirements.

The pertinent facts that relate to the stop work are as follows:

1. On May 6, 1983, MPQAD issued a nonconformance report (NCR) to document drift set deficiencies identified on previous Remedial Soils installations. As a result of the NCR, Hold Tags were applied.

2. On May 7, 1983, MPQAD issued an NCR to document drift set deficiencies identified during installation of pier KC-2 (East). As a result of the NCR, Hold Tags were applied.

3. On May 9, 1983, the licensee determined that work had continued on pier KC-2 (East) despite the presence of the Hold Tags. An additional NCR was issued to document the Hold Tag violations. At noon on May 9, 1983, the Field Soils Organization (FSO) stopped Remedial Soils work activities due to the Hold Tag violations. Although a formal Stop Work Order was not issued, 53 workers were sent home.

4. At 8:00 a.m. on May 10, 1983, the licensee resumed Remedial Soils work activities. The resumption of work was allowed after a resolution of differences between MPQAD and FSO pertaining to the significance of NCR's and Hold Tags. The NRC was informed of the Remedial Soils stop work by Stone and Webster (S&W) personnel during their meeting with the Midland Resident Inspectors to discuss the monthly S&W report of Remedial Soils work activities.

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

J. J. Harrison for

R. F. Warnick, Director
Office of Special Cases

cc: A. B. Davis
J. J. Harrison
R. N. Gardner
R. B. Landsman
R. J. Cook

Attachment #2

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

NOV 19 1982

RECEIVED NOV 26 1982

Docket Nos: 50-329 OM, OL
and 50-330 OM, OL

Dr. Paul Shewmon, Chairman
Advisory Committee on Reactor Safeguards
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Dr. Shewmon:

Subject: Report on Midland Design and Construction Problems, Their Disposition, and Overall Effectiveness of the Effort to Assure Appropriate Quality

The ACRS Interim Report on Midland Plant, Units 1 and 2 dated June 8, 1982, requested, in part, "a report which discusses design and construction problems, their disposition, and the overall effectiveness of the effort to assure appropriate quality."

Supplement No. 1 to the Midland Safety Evaluation Report (SSER 1) replied that Region III would prepare such a report addressing construction problems for the period from the beginning of construction through June 30, 1982. The enclosed report responds to that reply. SSER 1 also indicates that a final report on overall quality of plant construction will be issued for the remaining period following completion of construction.

In addition, the staff is currently reviewing the several programs proposed by the applicant to independently verify design and construction of the Midland Plant. The results of this review will be addressed in a future supplement to the SER.

Sincerely,

Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

cc: See next page

8211300004

MIDLAND

Mr. J. W. Cook
Vice President
Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

cc: Michael I. Miller, Esq.
Ronald G. Zamarin, Esq.
Alan S. Farnell, Esq.
Isham, Lincoln & Beale
Three First National Plaza,
51st floor
Chicago, Illinois 60602

James E. Brunner, Esq.
Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201

Ms. Mary Sinclair
5711 Summerset Drive
Midland, Michigan 48640

Stewart H. Freeman
Assistant Attorney General
State of Michigan Environmental
Protection Division
720 Law Building
Lansing, Michigan 48913

Mr. Wendell Marshall
Route 10
Midland, Michigan 48640

Mr. Roger W. Huston
Suite 220
7910 Woodmont Avenue
Bethesda, Maryland 20814

Mr. R. B. Borsum
Nuclear Power Generation Division
Babcock & Wilcox
7910 Woodmont Avenue, Suite 220
Bethesda, Maryland 20814

Cherry & Flynn
Suite 3700
Three First National Plaza
Chicago, Illinois 60602

Mr. Paul Rau
Midland Daily News
124 McDonald Street
Midland, Michigan 48640

Lee L. Bishop
Harmon & Weiss
1725 I Street, N.W., Suite 506
Washington, D. C. 20006

Mr. Don van Farrowe, Chief
Division of Radiological Health
Department of Public Health
P.O. Box 33035
Lansing, Michigan 48909

Mr. Steve Gadler
2120 Carter Avenue
St. Paul, Minnesota 55108

U.S. Nuclear Regulatory Commission
Resident Inspectors Office
Route 7
Midland, Michigan 48640

Ms. Barbara Stamiris
5795 N. River
Freeland, Michigan 48623

Mr. Paul A. Perry, Secretary
Consumers Power Company
212 W. Michigan Avenue
Jackson, Michigan 49201

Mr. Walt Apley
c/o Mr. Max Clausen
Battelle Pacific North West Labs (PNWL)
Battelle Blvd.
SIGMA IV Building
Richland, Washington 99352

Mr. I. Charak, Manager
NRC Assistance Project
Argonne National Laboratory
9700 South Cass Avenue
Argonne, Illinois 60439

James G. Keppler, Regional Administrator
U.S. Nuclear Regulatory Commission,
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Mr. Ron Callen
Michigan Public Service Commission
6545 Mercantile Way
P.O. Box 30221
Lansing, Michigan 48909

cc: Commander, Naval Surface Weapons Center
ATTN: P. C. Huang
White Oak
Silver Spring, Maryland 20910

Mr. L. J. Auge, Manager
Facility Design Engineering
Energy Technology Engineering Center
P.O. Box 1449
Canoga Park, California 91304

Mr. Neil Gehring
U.S. Corps of Engineers
NCEED - T
7th Floor
477 Michigan Avenue
Detroit, Michigan 48226

Charles Bechhoefer, Esq.
Atomic Safety & Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. Frederick P. Cowan
Apt. B-125
6125 N. Verde Trail
Boca Raton, Florida 33433

Jerry Harbour, Esq.
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Geotechnical Engineers, Inc.
ATTN: Dr. Steve J. Poulos
1017 Main Street
Winchester, Massachusetts 01890

Midland Nuclear Power Plant, Units 1 and 2

Docket No. 50-329
Docket No. 50-330

REPORT ON DESIGN AND CONSTRUCTION PROBLEMS FOR PERIOD FROM START OF CONSTRUCTION THROUGH JUNE 30, 1982

Report Requested by Advisory Committee on Reactor Safeguards

2 9 P P.

I. Introduction

The following report prepared by the NRC, through its Region III office, discusses Midland construction problems, their disposition, and the overall effectiveness of the Consumers Power Company's efforts to ensure appropriate quality. The report was prepared at the request of the Advisory Committee on Reactor Safeguards and in response to commitments made in Supplement No. 1 of the Safety Evaluation Report. The report covers the period starting with the beginning of construction up to June 30, 1982. A final report will be issued on the above subjects for the period from July 1, 1982 through the completion of construction discussing the overall quality of plant construction.

II. Summary and Conclusions of Overall Effectiveness

Since the start of construction, Midland has experienced some significant problems resulting in enforcement action (enforcement statistics are summarized in Table 1). Following the identification of each of these problems, the licensee has taken action to correct the problems and to upgrade the QA program and QA/QC staff. The most prominent action has been an overview program which has been steadily expanded to cover safety related activities. In spite of the corrective actions taken, the licensee continues to experience problems in the implementation of quality in construction.

Significant construction problems identified to date include: (1) 1973 - cadweld splicing deficiencies (Paragraph C.2); (2) 1976 - rebar omissions (Paragraph F.5); (3) 1977 - bulge in the Unit 2 Containment Liner Plate (Paragraph G.3); (4) 1977 - tendon sheath location errors (Paragraph G.4); (5) 1978 - Diesel Generator Building settlement (Paragraph H.10); (6) 1980 - allegations pertaining to Zack Company heating, ventilating, and air conditioning (HVAC) deficiencies (Paragraph J.7); (7) 1980 - reactor pressure vessel anchor stud failures (Paragraph J.8); (8) 1981 - piping suspension system installation deficiencies (Paragraph K.4); and (9) 1982 - electrical cable misinstallations (Paragraph L.2).

Consumers Power has on repeated occasions not reviewed problems to the depth required for full and timely resolution. Examples are: (1) rebar omissions (1976); (2) tendon sheath location errors (1977); (3) Diesel Generator Building settlement (1978); and (4) Zack Company HVAC deficiencies (1980). In each of these cases the NRC, in its investigation, has determined that the problem was of greater significance than first reported or that the problem was more generic than identified by Consumers Power Company.

The Region III inspection staff believes problems have kept recurring at Midland for the following reasons: (1) Overreliance on the architect-engineer, (2) failure to recognize and correct root causes, (3) failure to recognize the significance of isolated events (4) failure to review isolated events for their generic application, and (5) lack of an aggressive quality assurance attitude.

A history of the Midland design and construction problems and their disposition, as identified and described in NRC inspection reports, is contained in the following section (III). This history is for the period from the beginning of construction through June 30, 1982.

Table 1

ENFORCEMENT STATISTICS

YEAR	INSPECTIONS	NONCOMPLIANCES/ DEVIATIONS	HEADQUARTERS NOTICE OF VIOLATION	CIVIL PENALTIES	FAILS/ CALS	ORDERS MODIFYING CP/ SHOW CAUSE ORDERS	SIGNIFICANT CONSTRUCTION PROBLEMS
1970	6	4	0	0	0	0	0
1971	2	0	0	0	0	0	0
1972	1	0	0	0	0	0	0
1973	11	6	0	0	0	1 (Cadwelds)	1 (Cadwelds)
1974	11	3	0	0	0	0	0
✓ 1975	7	0	0	0	0	0	0
✓ 1976	9	17	1 (Rebar)	0	1 (Rebar)	0	1 (Rebar)
✓ 1977	15	10	0	0	1 (Tendon Sheath)	0	3 (Bulge in Containment Liner and 2 Tendon Sheath Installation Errors)
✓ 1978	21	14	0	0	0	0	1 (Diesel Generator Bldg. Settlement)
✓ 1979	30	17	0	0	0	1 (Diesel Generator Bldg. Settlement)	0
✓ 1980	37	21	0	1 (Zack)	1 (Zack)	0	2 (Zack HVAC & Reactor Anchor Studs)
✓ 1981	21	21	0	0	1 (Pipe Suspension System)	0	1 (Pipe Suspension System)
✓ 1982	14	7	0	0	0	2 (Diesel Generator Bldg. Settlement)	1 (Electric Cable Routing)

(1983)

III. Design and Construction Problems As Documented in NRC Inspection Reports

A. 1970

Six inspection reports were issued in 1970. In July 1970, construction activities authorized by the Midland Construction Permit Exemption commenced. A total of four items of noncompliance were identified in 1970. These items are described below:

Four items of nonconformance were identified in Inspection Report Nos. 50-329/70-06 and 50-330/70-06 concerning the installation of concrete. The nonconformances regarded: (1) concrete placement activities violated ACI Code; (2) laboratory not performing tests per PSAR; (3) sampling not per ASTM; and (4) QA/QC personnel did not act on deviations when identified. Licensee corrective actions included: (1) Bechtel to provide a report attesting to the Auxiliary Building base slab where lack of consolidation was apparent; (2) a commitment to perform tests at frequencies specified in the PSAR; and (3) a commitment to train workers and the inspection staff. This matter was discussed during the Construction Permit Hearings and is considered closed.

B. 1971-1972

Three inspections were conducted during this period. No items of noncompliance were identified. Midland construction activities were suspended pending the pre-construction permit hearings.

On December 15, 1972, the Midland Construction Permit was issued.

C. 1973

Eleven inspection reports were issued in 1973 of which two pertained to special management meetings, two to vendor inspections, one to an audit of the architect engineer, and six to onsite inspections. A total of six items of noncompliance were identified during 1973. One significant construction problem was identified involving deficiencies in cadweld splicing of rebar (see Paragraph 2). These items/problems are described below:

1. Noncompliances involving two separate Appendix B criteria with five different examples were identified during a special audit of the architect engineer's Quality Assurance Program. The noncompliances were documented in Inspection Report Nos. 50-329/73-08 and 50-330/73-08. The items of noncompliance regarded: (1) inadequate requirements for quality record retention; (2) inadequate drawing control; (3) inadequate procedures; and (4) unapproved specifications used for vendor control. Licensee corrective actions included: (1) revision of Bechtel Nuclear Quality Assurance Manual; (2) revision of Midland Internal Procedures Manual; (3) personnel instructed to audit the status of the drawing stick files weekly; (4) project administrator assigned the

responsibility for maintenance of master stick file; and (5) project engineer and staff to perform monthly surveillance of project record file. Inspection Report Nos. 50-329/74-03 and 50-330/74-03 concluded that appropriate corrective actions had been taken by the licensee relative to the identified violations.

2. One significant construction problem was identified during 1973. It involved cadweld splicing deficiencies and resulted in the issuance of a Show Cause Order. Details are as follows:

A routine inspection, conducted on November 6-8, 1973, identified eleven examples of four noncompliance items relative to rebar cadwelding operations. The noncompliances were documented in Inspection Report Nos. 50-329/73-10 and 50-330/73-10. These items were summarized as: (1) untrained cadweld inspectors; (2) rejectable cadwelds accepted by QC inspectors; (3) records inadequate to establish cadwelds met requirements; and (4) inadequate procedures.

As a result, the licensee stopped work on cadweld operations on November 9, 1973, which in turn stopped rebar installation and concrete placement work. The licensee agreed not to resume work until the NRC reviewed and accepted their corrective action. A Show Cause Order was issued on December 3, 1973, formally suspending cadwelding operations. On December 6-7, 1973, Region III and Headquarters personnel conducted a special inspection and determined that construction activities could be resumed in a manner consistent with quality criteria. Licensee corrective actions included: (1) the revision of the Bechtel specification to reflect requalification requirements; (2) development of instructions requiring that work specifications be reviewed prior to Class 1 work; (3) the establishment of provisions for Consumers Power QA review of work procedures; and (4) the establishment of procedures for the audit of Class 1 work.

The Show Cause Order was modified on December 17, 1973 allowing resumption of cadwelding operations based on inspection results. The licensee answered the Show Cause Order on December 29, 1973 committing to revise and improve the QA manuals and procedures and make QA/QC personnel changes.

On September 25, 1974, the Hearing Board found that the licensee was implementing its QA program in compliance with regulations and that construction should not be stopped.

D. 1974

Eleven inspection reports were issued in 1974 of which one pertained to a vendor inspection, one to an inspection at the licensee's corporate offices, and nine to onsite inspections. Three items of noncompliance were identified during 1974. These items are described below:

1. One noncompliance was identified in Inspection Report No. 50-329/74-01 and 50-330/74-01 concerning the use of unapproved procedures during the preparation of containment building liner plates for erection. Licensee corrective actions included: (1) intensive review of liner plate records for accuracy; (2) issuance of nonconformance report; (3) requirement imposed that unapproved copies of procedures transmitted to the site be marked "advance copy;" and (4) identification of procedure approval status. The licensee's actions in regards to this matter were reviewed and the noncompliance closed by the NRC as documented in Inspection Report Nos. 50-329/74-01 and 50-330/74-01.

2. One noncompliance was identified in Inspection Report Nos. 50-329/74-04 and 50-330/74-04, concerning the use of a weld method which was not part of the applicable weld procedure. Licensee corrective actions included: (1) issuance of a nonconformance report; (2) repair of subject welds; (3) reinstruction of welders; and (4) increased surveillance of containment liner plate field fabrications. The licensee's actions in regards to this matter were reviewed and the noncompliance closed by the NRC as documented in Inspection Report Nos. 50-329/74-04 and 50-330/74-04.

3. One noncompliance was identified in Inspection Report Nos. 50-329/74-11 and 50-330/74-11 concerning the failure of QC inspections to identify nonconforming rebar spacing. This violation is discussed further in the 1976 section of this report, Paragraph F.5.

E. 1975

Seven inspection reports were issued in 1975 of which one pertained to a meeting ir Region III, one to an inspection at the licensee's corporate offices, and five to onsite inspection.

No noncompliances were identified in 1975, however, the licensee in March and August of 1975 identified additional rebar deviations and omissions. This matter is further discussed in the 1976 section of this report, Paragraph F.5.

F. 1976

Nine inspection reports were issued in 1976 pertaining to nine onsite inspections. A total of seventeen items of noncompliance were identified during 1976. One significant construction problem was identified involving rebar omissions/placement errors and the issuance of a Headquarters Notice of violation (see Paragraph 5). These items/problems are described below:

1. Three items of noncompliance were identified in Inspection Report Nos. 50-329/76-01 and 50-330/76-01. These items regarded: (1) inadequate concrete oven temperature controls; (2) no measures to control nonconforming aggregate; and (3) failure to dispose of nonconforming aggregate as required. Licensee corrective actions included: (1) implementing a requirement for the reverification of oven temperature controls every three months; (2) removal of nonconforming aggregate from the batch plant area; (3) modification of subcontractor's QA manual; and (4) training of subcontractor's personnel to the revised QA manual. The corrective actions implemented by the licensee in regards to these noncompliances were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/76-02 and 50-330/76-02.

2. Two items of noncompliance were identified in Inspection Report Nos. 50-329/76-02 and 50-330/76-02. These items regarded: (1) the Vice President of Engineering Inspection did not audit test reports as required; and (2) corrective actions required by audit findings had not been performed. Corrective actions taken by the licensee included revising the U.S. Testing QA manual. The licensee's corrective actions taken in regards to these matters were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/76-08 and 50-330/76-08.

3. Three items of noncompliance were identified in Inspection Report Nos. 50-329/76-08 and 50-330/76-08. These items regarded: (1) inadequate classification, review, and approval or field engineering procedures and instructions; (2) inadequate documentation of concrete form work deficiencies; and (3) inadequate control of site storage of post tension embedments. Licensee corrective actions included: (1) revision of the Bechtel Nuclear QA manual; (2) revision of Bechtel field procedure for "Initiating and Processing Field Procedures and Instructions;" (3) initiation of Bechtel Discrepancy Report; (4) training sessions for Bechtel QC; and (5) revision of storage inspection procedures. The licensee's corrective actions in regards to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/77-01 and 50-330/77-01.

4. Two items of noncompliance were identified in Inspection Report Nos. 50-329/76-09 and 50-330/76-09. These items regarded: (1) noncompliance report not written to identify broken reinforcing steel; and (2) hold down studs for the reactor vessel skirt were not protected. Licensee corrective actions included: (1) inspection of all rebar dowels; (2) initiation of new field procedure; and (3) initiation of new

procedure for inspecting reactor vessel and steam generator anchor bolts. The licensee's corrective actions in regards to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/77-01 and 50-330/77-01.

5. One significant construction problem was identified during 1976. It involved rebar omissions/placement errors and the issuance of a Headquarters Notice of Violation. Details are as follows:

During an NRC inspection conducted in December 1974 the licensee informed the inspector that an audit had identified rebar spacing problems in the Unit 2 containment. The failure of QC inspectors to identify the nonconforming rebar spacing was identified in the 1974 NRC inspection report as an item of noncompliance. (See the 1974 section of this report, Paragraph D.3.) This matter was subsequently reported by the licensee as required by 10 CFR 50.55(e).

Additional rebar deviations and omissions were identified in March and August 1975 and in April, May and June 1976.

Five items of noncompliance regarding reinforcement steel deficiencies were identified in Inspection Report Nos. 50-329/76-04 and 50-330/76-04. These items regarded: (1) no documented instructions for the drilling and placement of reinforcement steel dowels; (2) nonconformance reports concerning reinforcement steel deficiencies were not adequately evaluated; (3) inadequate inspections of reinforcement steel; (4) inadequate evaluations of a nonconformance report problem relative to 10 CFR 50.55(e) reportability requirements; and (5) results of reviews, interim inspections, and monitoring of reinforcement steel installations were not documented.

The licensee's response, dated June 18, 1976, listed 21 separate items (commitments) for corrective actions. A June 24, 1976 letter from the licensee provided a plan of action schedule for implementing the 21 items. The licensee suspended concrete placement work until the items addressed in the licensee's June 24 letter were resolved or implemented. This commitment was documented in a Region III Immediate Action Letter (IAL) to the licensee, dated June 25, 1976.

Rebar installation and concrete placement activities were resumed in early July, 1976 following satisfactory completion of the corrective actions and verification by Region III as documented in Inspection Report Nos. 50-329/76-05 and 50-330/76-05.

A subsequent inspection to followup on reinforcing steel placement problems identified two noncompliances. These noncompliances are documented in Inspection Report Nos. 50-329/76-07 and 50-330/76-07. The noncompliances regarded: (1) failure to follow procedures; and (2) inadequate Bechtel inspections of rebar installations. The inspection report documents licensee corrective actions which included: (1) removal of cognizant field engineer and lead Civil engineer from the project; (2) removal of lead Civil Quality Control engineer from the project; (3) reprimand of cognizant inspector; (4) additional training given to cognizant foremen, field engineers, superintendants and Quality Control inspectors; and (5) assignment of additional field engineers and Quality Control engineers. The licensee's actions in regard to these items were reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/76-07 and 50-330/76-07.

As a result of the rebar omissions and placement errors, a Headquarters Notice of Violation was issued on August 13, 1976.

Additional actions taken by the licensee included the establishment of an overview inspection program to provide 100% reinspection of embedments by the licensee following acceptance by the contractor Quality Control personnel.

Additional actions taken by the contractor included: (1) personnel changes and retraining of personnel; (2) preparation of a technical evaluation for the acceptability of each identified construction deficiency; and (3) improvement in the QA/QC program coverage of civil work.

G. 1977

Twelve inspections pertaining to Unit 1 and fifteen inspections pertaining to Unit 2 were conducted in 1977. Ten items of noncompliance were identified during 1977. Two significant construction problems were identifed involving a bulge in the Unit 2 containment liner plate (see Paragraph 3) and errors in the placement of tendon sheathings (see Paragraph 4). These items/problems are described below:

1. Five examples of noncompliance with Criterion V of 10 CFR 50, Appendix B, were identified in Inspection Report Nos. 50-329/77-05 and 50-330/77-08. The examples of noncompliance regarded: (1) inadequate clearance between concrete wall and pipe support plates; (2) assembly of pipe supports using handwritten drawing changes; (3) inadequate preparation and issue of audit reports; (4) inadequate review of nonconformance reports and audit findings for trends; and (5) inadequate tagging of defective measuring equipment. Licensee corrective actions included: (1) clarification of

design and acceptance criteria contained in pertinent specifications; (2) modification and review of Quality Control Instructions; (3) issuance of two field procedures relative to field modifications of piping hanger drawings; (4) staffing of additional QA personnel at the site; (5) closer management attention; and (6) additional training in the area of tagging. The licensee actions in regard to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/77-08, 50-330/77-11, 50-329/78-01, and 50-330/78-01.

2. Three items of noncompliance were identified in Inspection Report Nos. 50-329/77-09 and 50-330/77-12. The items regarded: (1) failure to follow audit procedures; (2) failure to qualify stud welding procedures; and (3) inadequate welding inspection criteria. Licensee corrective actions included: (1) administrative instruction issued to require the audit manager to obtain a semi-monthly audit findings status report from the project manager; (2) administrative instruction issued for the close out and followup of internal corrective action requests; (3) revision of Quality Control Instruction; (4) special inspections and audit; and (5) prescribing specific acceptance criteria. The licensee's actions in regard to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/78-01, 50-330/78-01, 50-329/78-05, and 50-330/78-05.

3. A significant construction problem involving a bulge in the Unit 2 containment liner plate was identified in 1977. Details of the liner plate bulge follow:

   The initial identification by the licensee of a bulge in the Unit 2 liner plate occurred on February 26, 1977. The liner plate bulge occurred between column line azimuths 250 degrees and 270 degrees and between elevations 593 and 700. Inspection Report No. 50-330/77-02 documents a special inspection concerning the liner plate bulge. This report further identifies an item of noncompliance relative to the failure of the licensee to report the bulge deficiency pursuant to the requirements of 10 CFR 50.55(e). The licensee's corrective actions in regard to this item were reviewed and the item closed by the NRC as documented in Inspection Report No. 50-330/77-14.

   The cause of the liner plate bulge was determined to be due to a leaking 2 inch water line installed in the containment concrete as a construction convenience. It was theorized that the water line froze, started to leak, allowing water to seep behind the liner. The water line was supplied by a construction water pump that was set to cycle between 100 and 130 PSI. This pressure was considered to be sufficient to cause the liner plate bulge.

A meeting was held on April 4, 1977 at the Ann Arbor, Michigan Office of Bechtel to review the original design and construction concept of the containment liner, the procedures and actions taken during the removal of bulge affected zones, the investigation activities and results, and to ascertain the concepts involved in the licensee's proposed repair program.

The containment liner bulge deficiency repair was started on August 1, 1977. Inspection Report No. 50-330/77-11 documents the observed fit up and welding of the first four foot lift of replacement liner plate installed. The completion of repair and the repair records were subsequently reviewed as documented in Inspection Report No. 50-330/79-25.

4. A second significant construction problem involved tendon sheath placement errors and resulted in an Immediate Action Letter (IAL). Details are as follows:

The licensee reported, on April 19, 1977. the discovery of an error in the Unit 1 containment building which resulted in two tendon sheathings (H32-036 and H13-036) being misplaced, and two tendon sheathings (H32-037 and H13-037) being omitted. As shown on pertinent vendor drawings, these four tendons were to be deflected downward to clear the two main steam penetrations at center line elevation 707' 0". Concrete had been placed to a construction joint at elevation 703' 7" approximately one week before these tendon deficiencies were discovered.

Corrective actions resulted in the rerouting of tendon sheathing H32-037, originally planned for below the penetration, to a new alignment above the penetration. Tendon sheathing H13-037 was installed below the penetration. Tendon sheathings H32-036 and H13-036 did not require modification.

The tendon sheath placement errors and the past history of rebar placement errors indicated the need for further NRC evaluation of the licensee's QA/QC program. As a result, an IAL was issued to the licensee on April 29, 1977. Licensee commitments addressed by this IAL included: (1) NRC notification prior to repairs or modifications involving the placement of concrete in the area of the misplaced and omitted tendon sheaths; (2) identification of the cause of the tendon sheath deficiencies and implementation of required corrective action; (3) expansion of the licensee's QC overview program; (4) NRC notification of all embedment placement errors identified after QC acceptance; (5) review and revision of QC inspection procedures; and (6) training of construction and inspection personnel.

A special QA program inspection was conducted in May 1977 as documented in Inspection Report Nos. 50-329/77-05 and 50-330/77-08. The inspection team was made up of personnel from Region I, Region III, and Headquarters. It was the consensus of opinion of the inspectors that the licensee's program was acceptable.

The licensee issued the final 50.55(e) report on this matter on August 12, 1977. Final onsite review was conducted and documented in Inspection Report Nos. 50-329/77-08 and 50-329/79-15.

H. 1978

Twenty-two inspections and one investigation were conducted during 1978. A total of fourteen items of noncompliance were identified in 1978. One significant construction problem was identified involving excessive settlement of the Diesel Generator Building foundation (see Paragraph 10). These items/problems are described below:

1. Three items of noncompliance were identified in Inspection Report Nos. 50-329/78-03 and 50-330/78-03. These items regarded: (1) inadequate inspections of welds on cable tray supports; (2) inadequate control of welding voltage and amperage as required by AWS; and (3) inadequate documentation of repairs on purchased equipment. Licensee corrective actions included: (1) additional training given Quality Control Engineers and craft welders; (2) revision of pertinent technical specifications and weld acceptance requirements; (3) revision of welding procedures; (4) revisions of vendor QA manual; and (5) reinspections and engineering evaluations. The licensee actions in regard to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/78-15, 50-330/78-15, 50-329/79-25, 50-330/79-25, 50-329/81-12, 50-330/81-12, 50-329/79-22, and 50-330/79-22.

2. Two items of noncompliance were identified in Inspection Report Nos. 50-329/78-05 and 50-330/78-05. These items regarded: (1) inadequate control of welding filler material; and (2) inadequate protection of spool pieces. Licensee corrective actions included: (1) additional instructions given to welding personnel; (2) generation of nonconformance report to require Bechtel to perform a thorough inspection of the facility, correct and document discrepancies noted, and instruct craft personnel. The licensee actions in regard to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/78-05, 50-330/78-05, 50-329/79-22, and 50-330/79-22.

3. Two examples of noncompliance with one 10 CFR 50 Appendix B criterion were identified in Inspection Report Nos. 50-329/78-07 and 50-330/78-07. These examples regarded: (1) inadequate

control of drawings; and (2) inadequate drawing control procedures. Licensee corrective actions included: (1) Zack and Bechtel revised drawing control procedures; and (2) extensive audits of drawing controls. The licensee actions in regard to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/79-25 and 50-330/79-25.

4. One item of noncompliance was identified in Inspection Report No. 50-330/78-09 concerning inadequate backing gas flow rate during welding operations. Licensee corrective actions included: (1) revision of Bechtel welding procedure specifications; (2) revision of Bechtel Quality Control Instruction; and (3) additional training for all welding Quality Control Engineers. The licensee's actions in regard to this item were subsequently reviewed and the item closed by the NRC as documented in Inspection Report No. 50-330/78-16.

5. Two items of noncompliance were identified in Inspection Report Nos. 50-329/78-13 and 50-330/78-13. The items regarded: (1) inadequate inspection of weld joints; and (2) inadequate storage of Class 1E equipment. Licensee corrective actions included: (1) revision of welding specifications; (2) additional instructions to QC inspectors; (3) additional overinspections; (4) upgrade of administrative procedures; and (5) actions to bring storage environment within controlled specifications. The licensee's actions in regard to these items were reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/78-13 and 50-330/78-13.

6. Two items of noncompliance were identified in Inspection Report Nos. 50-329/78-15 and 50-330/78-15. These items regarded: (1) nonconforming welds on Main Steam Isolation Valve support structures; and (2) inadequate corrective action taken to repair nonconforming Nelson Stud weld attachments. Licensee corrective actions included: (1) responsible welding Quality Control Engineer required to attend training course; (2) defective welds reworked; and (3) engineering evaluation. The licensee's actions in regard to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/79-22, 50-330/79-22, 50-329/79-25 and 50-330/79-25.

7. One deviation was identified in Inspection Report No. 50-330/78-16 concerning the failure to meet ASME code requirements for nuclear piping. Licensee corrective actions included the determination that the impact test values of the pipe material in question met the code requirements, and the UT thickness measurements made by ITT Grinnell were in error and

voided by measurements made by Bechtel. The licensee's actions in regard to this item were subsequently reviewed and the item closed by the NRC as documented in Inspection Report No. 50-330/79-24.

8. One item of noncompliance was identified in Inspection Report Nos. 50-329/78-17 and 50-330/78-17 regarding the failure to follow weld procedures pertaining to the repair welding of cracked welds on the personnel air locks. The licensee's corrective actions included steps to revise affected drawings and to update the stress analysis report for the air locks. The corrective actions taken by the licensee will be reviewed during future NRC inspections.

9. One item of noncompliance was identified in Inspection Report Nos. 50-329/78-22 and 50-330/78-22 concerning the failure to perform specified maintenance and inspection activities on Auxiliary Feed Pumps. Licensee corrective actions included: (1) training of pertinent Quality Control engineers; (2) transition of personnel in QC department relative to storage and maintenance activities; and (3) inspections and evaluations of omitted maintenance. The licensee's actions in regard to this item were subsequently reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/78-22 and 50-330/78-22.

10. One significant construction problem was identified during 1978. It involved excessive settlement of the Diesel Generator Building foundation. Details are as follows:

    The licensee informed the Region III office on September 8, 1978, per requirements of 10 CFR 50.55(e), that settlement of the Diesel Generator foundations and structures was greater than expected.

    Fill material in this area was placed between 1975 and 1977, with construction starting on the diesel generator building in mid-1977. Review of the results of the Region III investigation/inspection into the plant fill/Diesel Generator building settlement problem indicate many events occurred between late 1973 and early 1978 which should have alerted Bechtel and the licensee to the pending problem. These events included nonconformance reports, audit findings, field memos to engineering, and problems with the administration building fill which caused modification and replacement of the already poured footing and replacement of the fill material with lean concrete.

    Causes of the excessive settlement included: (1) inadequate placement method - unqualified compaction equipment and excessive lift thickness; (2) inadequate testing of the soil material; (3) inadequate QC inspection procedures; (4) unqualified Quality Control inspectors and field engineers; and (5) overreliance on inadequate test results.

Lead technical responsibility and program review for this issue was transferred to NRR from IE by memo, dated November 17, 1978.

During 1978 the licensee conducted soil borings in the area of the Diesel Generator building and in other plant fill areas. In addition, a team of consultants who specialize in soils was retained by the licensee to provide an independent evaluation and provide recommendations concerning the soil conditions existing under the Diesel Generator building.

As previously stated, an investigation was initiated in December 1978 by the NRC to obtain information relating to design and construction activities affecting the Diesel Generator Building foundation and the activities involved in the identification and reporting of unusual settlement of the building. The results of the investigation and additional developments in regard to this matter are discussed in the 1979 section of this report, Paragraph I.11.

I. 1979

Thirty inspection reports were issued in 1979 of which one pertained to an onsite management meeting, two to investigations, one to a vendor inspection, one to a meeting in Region III, and twenty-five to onsite inspections. A total of seventeen items of noncompliance were identified in 1979. These items are described below:

1. One item of noncompliance was identified in Inspection Report Nos. 50-329/79-10 and 50-330/79-10 concerning inadequate measures to assure that the design basis was included in drawings and specifications. Licensee corrective actions included: (1) revision to Midland FSAR; and (2) revision to pertinent specification. The licensee's actions in regard to this item were subsequently reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/79-19 and 50-330/79-19.

2. Three items of noncompliance were identified in Inspection Report Nos. 50-329/79-12 and 50-330/79-12. The items were: (1) inadequate corrective action in regard to drawing controls; (2) discrepancy in Zack Welding Procedure Specification; and (3) inadequate control of purchased material. Licensee corrective actions included: (1) audit of drawing control program; (2) revision to drawing control requirements; (3) revision of Zack Welding Procedure Specification; (4) review of other Zack procedures; (5) missing data added to documentation packages; and (6) audits of other documentation packages. The actions taken by the licensee were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/81-01, 50-330/81-01, 50-329/80-15, 50-330/80-16, 50-329/79-22, and 50-330/79-22.

3. One item of noncompliance was identified in Inspection Report No. 50-330/79-13 concerning the failure to inspect all joints and connections on the Incore Instrument Tank as prescribed in the hydrostatic test procedure. Licensee corrective actions included a supplemental test of the Incore Instrument Tank and the initiation of a supplemental test report. The licensee's actions in regards to this matter were subsequently reviewed and the item closed by the NRC as documented in Inspection Report No. 50-330/80-38.

4. One item of noncompliance was identified in Inspection Report No. 50-330/79-14 concerning the use of a wad of paper in making a purge dam during welding activities. Licensee corrective actions included: (1) revision of pertinent procedures; (2) revision of pertinent Quality Control inspection checklist; and (3) training sessions for welders and Quality Control inspectors. The licensee's actions in regards to this matter were subsequently reviewed and the item closed by the NRC as documented in Inspection Report No. 50-330/80-16.

5. One item of noncompliance was identified in Inspection Report Nos. 50-329/79-18 and 50-330/79-18 concerning inadequate controls to protect materials and equipment from welding activities. Licensee corrective actions included training sessions for cognizant Field Engineers, Superintendents, General Foremen and Foremen. The licensee's actions in regards to this matter were subsequently reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/80-15 and 50-330/80-16.

6. Two items of noncompliance were identified in Inspection Report Nos. 50-329/79-19 and 50-330/79-19. These items regarded: (1) failure to ensure that appropriate quality standards were in the specification for structural backfill; and (2) Quality Control inspection personnel performing containment prestressing activities were not being qualified as required. Licensee corrective actions included: (1) revision of pertinent specification; (2) examination given to Level I and Level II inspector; and (3) reinspection of selected tendons. The licensee's actions in regards to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-330/80-09, 50-329/80-04 and 50-330/80-04.

7. One item of noncompliance was identified in Inspection Report Nos. 50-329/79-20 and 50-330/79-20 concerning inadequate controls for welding activities pertaining to 4.16 KV switchgear. Licensee corrective actions included: (1) correction of relevant records; (2) additional training for Quality Control Engineers; and (3) additional training for the Quality Control Document Coordinator. The licensee's actions were subsequently reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/80-15 and 50-330/80-16.

8. One item of noncompliance was identified in Inspection Report No. 50-330/79-22 concerning inadequate weld rod controls. Licensee corrective actions included a training session for cognizant welding personnel. The actions taken by the licensee in regards to this matter were subsequently reviewed and the item closed by the NRC as documented in Inspection Report No. 50-330/80-01.

9. One item of noncompliance was identified in Inspection Report Nos. 50-329/79-26 and 50-330/79-26 concerning failure to follow procedures relative to the shipment of auxiliary feed water pumps to the site with nonconforming oil coolers. Licensee corrective actions included: (1) reinstruction given to cognizant engineer; and (2) Supplied Deviation Disposition Request (SDDR) generated by the vendor. The licensee's actions in regards to this matter were reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/79-26 and 50-330/79-26.

10. One item of noncompliance was identified in Inspection Report Nos. 50-329/79-27 and 50-330/79-27 concerning the violation of QC Hold Tags. Licensee corrective actions included: (1) a training session for Construction Supervisors and Field Engineers; and (2) a Field Instruction on Quality Control Hold Tags was issued. The licensee's actions in regards to this matter were subsequently reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/81-04 and 50-330/81-04.

11. As a followup to the significant construction problem identified in 1978 (see Paragraph H.10), an investigation was initiated in December, 1978 to obtain information relating to design and construction activities affecting the Diesel Generator Building foundations and the activities involved in the identification and reporting of unusual settlement of the building. The investigation findings were documented in Inspection Report Nos. 50-329/78-20 and 50-330/78-20, dated March 22, 1979. Information obtained during this investigation indicated: (1) a lack of control and supervision of plant fill activities contributed to the inadequate compaction of foundation material; (2) corrective action regarding nonconformances related to plant fill was insufficient or inadequate as evidenced by the repeated deviations from specification requirements; (3) certain design bases and construction specifications related to foundation type, material properties, and compaction requirements were not followed; (4) there was a lack of clear direction and support between the contractor's engineering office and construction site personnel; and (5) the FSAR contained inconsistent, incorrect and unsupported statements with respect to foundation type, soil properties, and settlement values. Nine examples of noncompliance involving four different 10 CFR 50, Appendix B Criteria were identified in the subject inspection report.

Meetings were held on February 23, 1979 and March 5, 1979 at the NRC Region III office to discuss the circumstances associated with the settlement of the Diesel Generator Building at the Midland facility. The NRC staff stated that it's concerns were not limited to the narrow scope of the settlement on the Diesel Generator Building, but extended to various buildings, utilities and other structures located in and on the plant area fill. In addition, the staff expressed concern with the Consumers Power Company Quality Assurance Program. Under the authority of Section 182 of the Atomic Energy Act of 1954, as amended, and Section 50.54(f) of 10 CFR Part 50, additional information was requested regarding the adequacy of the fill and the quality assurance program for the Midland site in order for the Commission to determine whether enforcement action such as license modification, suspension or revocation should be taken. Question 1 of the 50.54(f) letter dated March 21, 1979 requested information regarding the quality assurance program. On April 24, 1979, Consumers Power Company submitted the initial response to the 50.54(f) request, Questions 1 through 22. As a result of the NRC staff review of Question 1, the NRC concluded that the information provided was not sufficient for a complete review. Subsequently, on September 11, 1979, the NRC issued a request for additional quality assurance information (Question 23). On November 13, 1979, Consumers Power Company submitted Revision 4 to the 50.54(f) responses which included response to Question 23. As a result of the Region III investigation report and CPCo responses, the NRC issued an Order modifying construction Permits No. CPPR-81 and No. CPPR-82, dated December 6, 1979. This order prohibited further soils related activities until the submission of an admendment to the application seeking approval of the Remedial Soils work with the provision that the order would not become effective in the event that the licensee requested a hearing. Due to the licensee's decision to request a hearing this order forms the basis for the ongoing ASLB Hearings.

During 1979, the licensee continued soil boring operations in order to identify and develop the quality of material in the plant area fill and beneath safety related structures. The licensee completed a program regarding the application of a surcharge of sand material in and around the Diesel Generator Building. This surcharge was an attempt to accelerate any future settlement of the Diesel Generator Building by consolidating the foundation material.

Additional developments in this matter are discussed in the 1980 section of this report, Paragraph J.9.

J. 1980

Thirty-seven inspection reports were issued in 1980 of which two pertained to meetings at the licensee's corporate office, one to a meeting in Glen Ellyn, two to investigations, and thirty-two to onsite inspections. A total of twenty-one items of noncompliance were identified during 1980. Two significant construction problems were identified involving quality assurance problems at the Zack Company (see Paragraph 7) and deficient reactor vessel anchor studs (see Paragraph 8). These items/problems are described below:

1. Two items of noncompliance and one deviation were identified in Inspection Report Nos. 50-329/80-01 and 50-330/80-01. These items regarded: (1) a welder welding on material of thickness which exceeded his qualified range; (2) failure to date and sign the cleanliness inspection of Unit 2 Service Water System valve; and (3) failure to implement a design change or prepare a Field Change Request. Licensee corrective actions in regards to the items of noncompliance included: (1) testing and qualification of the subject welder; (2) reinstruction of QC engineer; (3) review of the inspection records for additional valves; and (4) the revision of applicable turnover procedures. The licensee's actions in regards to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/80-20, 50-330/80-21, 50-329/82-04 and 50-330/82-04.

2. One item of noncompliance was identified in Inspection Report No. 50-329/80-09 concerning the failure to maintain levelness requirements during core support assembly lifts. The licensee's corrective actions in response to the item of noncompliance included the issuance of a nonconformance report and the commitment to ensure compliance with Quality Control procedures. The licensee's corrective actions in regards to this matter will be reviewed during subsequent NRC inspections.

3. One item of noncompliance was identified in Inspection Report Nos. 50-329/80-20 and 50-330/80-21 concerning the failure of a Bechtel purchase order for E7018 welding rods to specify the applicable codes. Licensee commitments in regards to corrective actions included an audit of the ordering and receiving records of weld filler material. The licensee's corrective actions in regards to this matter will be reviewed during subsequent NRC inspections.

4. One item of noncompliance was identified in Inspection Report Nos. 50-329/80-21 and 50-330/80-22 concerning the failure to perform an audit of Photon Testing, Inc. for services to qualify Zack Company welders. Licensee corrective actions included an audit of Photon Testing, Inc. The licensee's actions in regards to this matter were subsequently reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/81-03 and 50-330/81-03.

5. One item of noncompliance was identified in Inspection Report Nos. 50-329/80-28 and 50-330/80-29 concerning the bypassing of a hold point on a Pressure Surge System weld. The inspection report further identifies that action had been taken to correct the identified noncompliance and to prevent recurrence. The item is closed.

6. One item of noncompliance was identified in Inspection Report Nos. 50-329/80-31 and 50-330/80-32 concerning substantial delays by the licensee in making 10 CFR Part 21 reportability determinations. Licensee corrective actions included training sessions for key personnel in recognizing 10 CFR 21 reporting obligations. The licensee's actions in regards to this matter were subsequently reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/81-07 and 50-330/81-07.

7. A significant construction problem involving quality assurance problems at the Zack Company, the heating, ventilating, and air condition contractor was identified in 1980. Details of the Zack problem follow:

   During March and April, 1980 the NRC received numerous allegations pertaining to the Zack Company. The Zack Company is the heating, ventilation and air conditioning (HVAC) subcontractor at the Midland construction site. The allegations dealt with material traceability, violations of procedures, falsification of documents, and the training of quality control inspectors.

   As the result of the allegations, an investigation was initiated by the NRC. During the initial phases of the investigation, the NRC determined that Consumers Power Company had issued a Management Corrective Action Request (MCAR), dated January 8, 1980, pertaining to the Zack Company. The MCAR showed that Zack had failed to initiate corrective action in a timely manner on a large number of nonconformance reports and audit findings and had failed to address other requirements and commitments of the quality program.

   Consumers Power Company had issued seven nonconformance reports during the period of May 23 to October 2, 1979 all of which recommended 100% reinspection of work as a corrective action. The investigation determined that as of March 19, 1980, corrective action had not been completed on any of the nonconformance reports.

   Based on preliminary findings during the investigation, which revealed some instances of continued nonconformance in the implementation of Zack's Quality Assurance Program, an Immediate Action Letter (IAL) was issued to the licensee on March 21, 1980. The IAL stated the NRC's understanding that a Stop Work Order had been issued to the Zack Corporation for all its safety related construction activities.

Seventeen examples of noncompliance involving eight different 10 CFR 50, Appendix B, criteria were identified during the investigation. The investigation findings are documented in Inspection Report Nos. 50-329/80-10 and 50-330/80-11. The licensee's actions in regards to the items of noncompliance were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/82-15 and 50-330/82-15.

On June 30, 1980, the NRC received from the licensee a letter documenting a Program Plan for resumption of safety related work by the Zack Company. The licensee identified that corrective actions required prior to lifting the Stop Work included: (1) the review and approval of all Field Quality Control Procedures and specific Weld Procedure Specifications; (2) the review and approval of the revised Zack QA Manual; (3) the training and certification of the QC personnel; and (4) the training of site production personnel.

Subsequent to followup NRC inspections to determine the effectiveness of licensee corrective actions, it was determined by the NRC, on August 14, 1980 that HVAC safety related work could resume.

The Bechtel Power Corporation released the Zack Company from the Stop Work Order by letter dated August 14, 1980.

As a result of the aforementioned investigation findings, the NRC imposed a Civil Penalty, on January 7, 1981, on Consumers Power Company for the amount of $38,000.

8. The second significant construction problem involved reactor pressure vessel anchor stud failures. Details are as follows:

On September 14, 1979, Consumers Power Company personnel notified the NRC of the discovery of a broken reactor vessel anchor stud on the Midland Unit 1 reactor vessel. On October 12, 1979, this condition was reported under the requirements of 10 CFR 50.55(e). Two other studs were subsequently found to be broken. As this condition reflected a significant deficiency, an NRC investigation was initiated in February 1980 to review the materials, manufacturer, and installation of the studs.

The investigation findings, as documented in Inspection Report Nos. 50-329/80-13 and 50-330/80-14, indicate several Quality Assurance deficiencies: (1) lack of licensee involvement; (2) failure to advise the heat treater of different heats of material; (3) inadequate document review; (4) failure to respond to indications that the studs were deficient; (5) failure to review materials previously purchased when the purchase specification was revised; and (6) miscalculation of

the stud stress area resulting in a slight over-specification stressing of the studs (this item was identified by the licensee).

Three items of noncompliance were identified in the inspection report. These items regarded: (1) failure to identify Subsection NF of the ASME Code as the applicable requirement for the reactor vessel anchor bolts; (2) failure to establish measures to assure that purchased material conforms to the procurement documents; and (3) failure to establish measures to assure that heat treating and nondestructive tests were controlled in accordance with applicable codes and specifications. Licensee commitments in regards to corrective actions included: (1) a commitment to conduct a review to confirm that safety related low alloy steel bolting and/or component support materials, which have been tempered and quenched and are 7/8" or greater in diameter, have been procured in accordance with proper codes and standards; (2) a commitment to obtain NRR approval of the acceptability of the Unit 2 reactor vessel anchor bolts and (3) a commitment that actual plant modifications to compensate for the defective bolts would not be started on Unit 1 until approval of the design concept was received from NRR.

The stud failure mechanism was identified as stress corrosion cracking which propagated to the point that the studs failed by cleavage fracture. Tests indicated that some studs utilized in Unit 2, although of different material and heat treatment, have above specification surface hardness readings.

The final report per 50.55(e) requirements was submitted by the licensee on December 1, 1981.

NRR has the lead responsibility for evaluation and approval of the licensee's proposals for resolution of this matter.

9. A special inspection was conducted in December, 1980 at the Bechtel Power Company Ann Arbor, Michigan offices to verify implementation of the specific commitments and action items reflected in Consumers Power Company response to 10 CFR 50.54(f) questions (regarding excessive settlement of the Diesel Generator Building foundations). The results of this inspection were documented in Inspection Report Nos. 50-329/80-32 and 50-330/80-33. Two items of noncompliance were identified regarding: (1) failure to provide adequate corrective actions with regard to identified audit results; and (2) inadequate design control. Licensee corrective actions included: (1) revision of procedures; (2) revision of specification; and (3) audit of FSAR sections. The licensee actions were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/81-12, 50-330/81-12, 50-329/81-19 and 50-330/81-19.

Additional information regarding this matter is discussed in the 1981 section of this report, Paragraph K.6.

K. 1981

Twenty-three inspection reports were issued in 1981 of which one pertained to a management meeting and twenty-two to onsite inspections. A total of twenty-one items of noncompliance were identified during 1981. One significant construction problem was identified involving deficiencies in piping suspension system installations (see Paragraph 4). These items/problems are described below:

1. Two items of noncompliance were identified in Inspection Report Nos. 50-329/81-04 and 50-330/81-04. These items regarded: (1) failure to account for all tools and materials used in a controlled clean room area; and (2) inadequate procedure for the installation of the Unit 2 vent valves in the core support assembly. Licensee corrective actions included: (1) the upgrading of personnel and equipment logs; (2) the addition of new logs; (3) issuance of a formal Stop Work Order for further work on the installation of vent valves; (4) the revision of installation procedures; (6) training and indoctrination of personnel performing vent valve installations; and (5) the revision of the overview inspection plan. The licensee's actions in regards to these items were reviewed and it was determined that action had been taken to correct the identified noncompliances and to prevent recurrence. This determination is documented in Inspection Report Nos. 50-329/81-04 and 50-330/81-04.

2. One item of noncompliance was identified in Inspection Report Nos. 50-329/81-08 and 50-330/81-08 regarding the failure to provide adequate storage conditions for Class 1E equipment. Licensee corrective actions included: (1) additional training for Bechtel maintenance engineers; (2) an audit of maintenance activities; and (3) reinspections of affected equipment. The licensee's actions in regards to this matter were subsequently reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/81-23 and 50-330/81-23.

3. Four items of noncompliance were identified in Inspection Report Nos. 50-329/81-11 and 50-330/81-11. These items regarded: (1) inadequate procedures for the temporary support of cables and for the routing of cables into equipment; (2) failure of QC inspectors to identify inadequate cable separation; (3) inadequate control of nonconforming raceway installations; and (4) failure to translate the FSAR requirements into instrumentation specifications. Licensee corrective actions in regards to (1) and (2) above, included: (1) the revision of cable pulling procedures;

(2) the repair of damaged cables; (3) training given to the termination personnel and the involved QC inspector; and (4) the revision of the cable termination procedure. The licensee's actions in regards to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/81-20, 50-330/81-20, 50-329/82-03 and 50-330/82-03. Licensee commitments in regards to corrective actions pertaining to items (3) and (4), above, included: (1) the addition of required barriers on pertinent raceway drawings; (2) the revision of Project Quality Control Instruction; (3) and the revision of the instrumentation specification. The licensee's actions in regards to these items will be reviewed during subsequent NRC inspections.

4. Eight items of noncompliance were identified during a special indepth team inspection to examine the implementation status and effectiveness of the Quality Assurance Program. The results of the inspection are documented in Inspection Report Nos. 50-329/81-12 and 50-330/81-12. Three of the items of noncompliance regarded: (1) failure to take adequate corrective action concerning the trend analysis procedure; (2) failure of QC inspections to identify a nonconforming cable bend radius; and (3) failure to take adequate corrective action in regards to the lack of rework procedures. Licensee corrective actions in regards to items (1) and (2) above, included: (1) the issuance of a new procedure for trending; (2) the revision of cable termination procedures; and (3) additional training given to the responsible QC inspector. The licensee's actions in regards to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/82-02, 50-330/82-02, 50-329/82-03 and 50-330/82-03. The licensee's commitments in regards to corrective actions pertaining to item (3) above, included: (1) the development of Administrative Guidelines and Instructions for rework; and (2) the revision of field procedures. The licensee's actions in regards to this item will be reviewed during subsequent NRC inspections.

The remaining five items of noncompliance identified in Inspection Report Nos. 50-329/81-12 and 50-330/81-12 are considered to be a significant construction problem. Safety related pipe support and restraint installations and QC inspection deficiencies in regard to those installations were identified. The five items of noncompliance pertaining to this issue regarded: (1) failure to install large bore pipe restraints, supports and anchors in accordance with design drawings and specifications; (2) failure of QC inspectors to reject large bore pipe restraints, supports and anchors that were not installed in accordance with design drawings and specifications; (3) failure to prepare,

review and approve small bore pipe and piping suspension system designs performed onsite in accordance with design control procedures; (4) failure to adequately control documents used in site small bore piping design activities; and (5) failure of audits to include a detailed review of system stress analysis and to follow up on previously identified hanger calculation problems. Licensee corrective actions in regards to items (3) through (5) included: (1) the review and upgrading of small bore piping calculations (2) audits of small bore piping activities; (3) revision of Engineering Directive; (4) additional training in QA procedures; and (5) audits of document control. The licensee's actions in regards to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/82-07 and 50-330/82-07.

As a result of the adverse findings, an Immediate Action Letter (IAL) was issued by the NRC on May 22, 1981 acknowledging the NRC's understanding that the licensee would not issue fabrication and construction drawings for the installation of the safety related small bore pipe and piping suspension systems until requirements identified in the IAL had been completed and audited.

The IAL requirements were subsequently reviewed and determined to have been satisfactorily addressed. This is documented in Inspection Report Nos. 50-329/81-14 and 50-330/81-14.

The licensee's actions in regards to noncompliance items (1) and (2) above, are discussed in Paragraph 1 of the following report section for 1982(L).

5. One item of noncompliance was identified in Inspection Report Nos. 50-329/81-14 and 50-330/81-14 concerning inadequate design controls involving the Bechtel Resident Engineer's review of the field engineers redline drawings for small bore piping. Licensee corrective actions included: (1) a 100% review of all questionable systems; and (2) the revision of a Project Instruction. The licensee's actions in regards to this matter were subsequently reviewed and the item closed by the NRC as documented in Inspection Report Nos. 50-329/82-07 and 50-330/82-07.

6. In January, 1981 an inspection was conducted by the NRC to verify whether adequate corrective actions had been implemented as described in the Consumers Power Company response to Questions 1 and 23 of 10 CFR 50.54(f) submittals (regarding excessive settlement of the Diesel Generator Building foundation). The findings during this inspection, which include three items of noncompliance and one deviation, are documented in Inspection Report Nos. 50-329/81-01 and

50-330/81-01. The items of noncompliance and the deviation regarded: (1) failure to develop test procedures for soils work activities; (2) failure to have soils laboratory records under complete document control; (3) failure to have explicit instructions for the onsite Geotechnical Engineer's review of test results; and (4) failure to have a qualified Geotechnical Engineer onsite. Licensee corrective actions included: (1) revision of Quality Control Procedures and Specification; (2) development of new Quality Control Procedures; and (3) the addition of a qualified Geotechnical Engineer. The licensee's actions in regards to these items were subsequently reviewed and the items closed by the NRC as documented in Inspection Report Nos. 50-329/81-12 and 50-330/81-12.

7. In March 1981, an inspection was initiated by the NRC to verify the licensee's Quality Assurance Program for the ongoing soil borings. The soil borings were performed by the licensee in response to a request from the Corps of Engineers for additional soil information for their review of the licensee's 10 CFR 50.54(f) answers. The findings of this inspection, which includes one item of noncompliance, are documented in Inspection Report Nos. 50-329/81-09 and 50-330/81-09. The noncompliance regards the lack of evaluation of Woodward-Clyde technical capabilities prior to the commencement of drilling operations. Licensee commitments in regards to corrective actions included: (1) the review, for compliance, of Midland Project major procurements and contracts; and (2) the review and revision of pertinent procedures. The licensee's corrective actions in regards to these items will be reviewed during subsequent NRC inspections.

L. <u>1982</u>

Fourteen inspection reports have been issued during 1982 covering the period through June 30, 1982 of which two pertain to management meetings, one to an investigation, one to the SALP meeting, and ten to onsite inspections. During this period of time seven items of noncompliance were identified. One significant construction problem was identified involving electrical cable misinstallations (see Paragraph 2). These items/problems are discussed below:

1. The licensee conducted reinspections to determine the seriousness of the safety related support and restraint installation and QC inspection deficiencies identified in Inspection Report Nos. 50-329/81-12 and 50-330/81-12. The results of the reinspections are documented in Inspection Report Nos. 50-329/82-07 and 50-330/82-07. From a sample size of 123 safety related supports and restraints installed and inspected by Quality Control, approximately 45% were identified by the licensee as rejectable.

On August 30, 1982, the licensee was informed of the NRC's position that the licensee shall reinspect all the supports and restraints installed prior to 1981 and perform sample reinspections of the components installed after 1981. The licensee has agreed to perform the reinspections.

2. One significant construction problem was identified during 1982. It involved electrical cable misinstallations. Details are as follows:

   During the special team inspection conducted in May 1981, 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 Midland Project Quality Assurance Department (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 NCRs. 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 Nos. 50-329/82-06 and 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 reinspection program for those cables installed after March 15, 1982. The licensee has agreed to perform the reinspections.

3. Three examples of noncompliance to one 10 CFR 50 Appendix B Criterion were identified in Inspection Report Nos. 50-329/82-03 and 50-330/82-03. These examples regarded: (1) failure to follow procedures concerning drawing changes; (2) inadequate specification resulting in the undermining of BWST No. 2 valve pit; and (3) inadequate control of changes to procedures. The licensee's response to the identified item of noncompliance is presently under review. Corrective actions taken by the licensee in regards to this item will be reviewed during future inspections.

4. Four examples of noncompliance to one 10 CFR 50 Appendix B Criterion and a deviation were identified in Inspection Report Nos. 50-329/82-05 and 50-330/82-05. The examples of noncompliance and the deviation regarded: (1) failure to review and approve a Mergentine (the soils contractor) field procedure prior to initiation of work; (2) inadequate control of specification changes; (3) inadequate acceptance

criteria for dewatering specification; (4) inadequate instruction to prepare or implement reinspection plans; and (5) inadequately qualified remedial soils staff. The corrective actions taken by the licensee in regards to this item will be reviewed during future inspections.

5. One item of noncompliance was identified in Inspection Report Nos. 50-329/82-06 and 50-330/82-06 concerning the licensee's failure to establish a QA program to provide controls over the installation of remedial soils instrumentation. This item resulted in the issuance of a letter by the licensee on March 31, 1982 confirming the licensee's suspension of all underpinning instrumentation installation activities until: (1) approved, controlled drawings and procedures or instructions were developed to prescribe underpinning instrumentation installation activities; (2) plans were established to inspect and audit instrumentation installation activities; and (3) Region III had concurred that (1) and (2), above, were acceptable.

   A followup inspection by Region III in April 1982 identified that the licensee had developed acceptable drawings, procedures, and instructions for underpinning instrumentation installations such that instrumentation installation activities could be resumed. An additional followup inspection on August 23, 1982 determined that the installation of underpinning instrumentation for the Auxiliary Building was complete and acceptable. This item will remain open pending the licensee's development of drawings, procedures, and instructions for the future installation of underpinning instrumentation for the Service Water Building.

6. One item of noncompliance and a deviation were identified in Inspection Report Nos. 50-329/82-11 and 50-330/82-11. The items regarded: (1) inadequate anchor bolt installation; and (2) the use of unapproved installation/coordination forms during remedial soils instrumentation installations. The licensee's responses to the identified items of noncompliance are presently under review. Corrective actions taken by the licensee in regards to these items will be reviewed during future inspections.

The ASLB issued an order modifying Construction Permits No. CPPR-81 and No. CPPR-82, dated April 30, 1982. This order suspended all remedial soils activities on "Q" soils for which the licensee did not have prior explicit approval. The ASLB issued another order, dated May 7, 1982 clarifying the April 30, 1982 order. This order only includes those activities bounded by the limits identified on Drawing C-45.

As a result of past Region III findings, the Region III Administrator created a special Midland Section staffed with individuals assigned solely to the Midland project. Since the formation of the Midland Section a work authorization procedure has been developed by Region III and the licensee to control work and ensure compliance to the ASLB Order.

Remedial Soils activities performed by the licensee thus far in 1982 involve: (1) the drilling of a number of wells which function as part of the temporary and permanent dewatering systems; (2) the installation of the freeze wall associated with the Auxiliary Building Underpinning activity; (3) the completion of the initial work on the access shaft; and (4) the completion of the Auxiliary Building instrumentation for remedial soils activities.

Midland Daily News

April 30, 1985

ATTACHMENT #3

Zack welders laid off again

4-30-85

By JAMES ISELER
Daily News staff writer

For the second time in five months, Consumers Power Co. has laid off Midland nuclear plant workers after the U.S. Nuclear Regulatory Commission questioned safety-related welding procedures.

Sixty Zack Co. welders were laid off two weeks ago because procedures for welding heating, ventilating and air conditioning (HVAC) ducts failed to meet NRC requirements, NRC inspector Ronald Cook said.

The layoffs come on the heels of another Zack layoff late last year when 151 welders were taken off their jobs because of concerns about their qualifications.

"The procedures for welding have not been requalified to the satisfaction of the NRC to allow them to go back to safety-related work," Cook said Thursday during a hearing before a federal licensing panel.

A spokesman for Consumers, which is building the plant, said Friday the second round of layoffs was made necessary by the lack of work.

"We don't have the work to be done until the procedures are qualified by MPQAD (the Midland Project Quality Assurance Department), and approved by the NRC," plant spokesman Norman Saari said Friday.

THE 60 WELDERS laid off recently are among the 151 taken off their jobs Nov. 30. They were rehired, then put "on the shelf" again when the new procedures did not pass the NRC, Saari said.

Although Consumers' MPQAD qualified the new procedures, Cook said he found them deficient after testing them in only one area. Consumers then decided to rework the procedures, Cook said Thursday.

That test took place about a month ago, he said.

Saari said there are 19 seperate safety-related welding procedures for HVAC systems, 13 of which are to be submitted to MPQAD next week. MPQAD is a department within the utility designed to oversee construction quality at the site.

WELDERS ALSO must be certified under the new procedures, Saari said. He could not estimate how long it would take for all the procedures and welders to be certified.

When all the welders and procedures are approved, Saari said, there will be about 160 Zack welders at the plant. Currently, 11 welders are working on non-safety areas. Both safety- and non-safety-related areas deal with HVAC, Saari said.

"That's the only area Zack is subcontracted to perform," he said.

Portions of the HVAC system area are safety-related because they are designed to provide a habitable atmosphere for control room workers during a radiation release accident.

TWO DAYS AFTER the Zack layoff last year, Consumers laid off more than 1,000 Bechtel Power Corp. workers and halted all safety-related work being performed by that firm. The utility then ordered a reinspection of Bechtel's safety-related work.

The reinspection stemmed from problems found by the NRC in the plant's diesel generator building, including evidence that its current state does not match construction drawings.

The Bechtel safety-related work has not resumed, Saari said. However, work to shore up buildings that have cracked and settled excessively after being built on poorly-compacted soil is ongoing.

Midland Nuke

Midland Daily News, Midland, Michigan

Thursday, December 2, 1982

Page 3

151 nuclear plant welders laid off

By PAUL RAU
Daily News staff writer

One hundred and fifty-one welders employed by the Zack Co. have been laid off at the Midland nuclear plant due to concerns about their qualifications and the welding procedures they were using, according to a federal official.

The layoffs mean all welding on safety-related heating, ventilating and air conditioning (HVAC) ducts at the nuclear plant has been halted until the U.S. Nuclear Regulatory Commission determines the welders and their procedures meet federal standards for nuclear plant work.

Wayne Shafer, chief of the Midland Section of the NRC's Office of Special Cases, predicted the welders won't be allowed to resume work on safety-related ducts until mid-December.

The Office of Special Cases is a special inspection team set up by the NRC this summer to look at construction problems at only two nuclear plants — Midland and Zimmer, in Ohio.

Shafer said the HVAC problems were revealed by a September audit by the Midland Project Quality Assurance Department (MPQAD) of Photon Testing Inc. Photon Testing is a subcontractor responsible for training Zack welders, certifying that they are qualified and are writing weld procedures for HVAC work.

The audit recommended that Photon Testing be removed as an approved contractor at the Midland plant because the firm was not implementing portions of a QA program and was implementing other portions improperly, Shafer said.

Shafer said the audit findings also reflect poorly on Consumers Power Co., Bechtel Power Corp. and Zack because those firms let contracts to Photon Testing which did not require it to invoke all of the government's QA standards.

QA is a system of overinspection designed to verify that nuclear plants are built according to federal specifications.

QA problems have plagued the Midland project for years, mystifying the NRC and leading it to focus intense scrutiny on the plant. The special Midland Section inspection team headed by Shafer is an example. Plant owner Consumers Power also has reorganized its MPQAD several times to make it more effective in finding and preventing construction problems.

IN ADDITION to the layoffs and the welding halt, Shafer said the qualification of new welders by Photon has been discontinued and all safety-relted weld procedures have been withdrawn. These actions taken by Consumers Power and Bechtel became effective at 3 a.m. Tuesday, he said.

Consumers Power spokesman Norman Saari said three actions will now be taken — development of new welding procedures, recertification of Zack welders and evaluation of their past work.

The NRC has not yet determined the seriousness of the HVAC situation, or whether the corrective actions were appropriate. "If it is determined that the welding was unsuccessful, it obviously will have to be repaired or removed and replaced," Shafer said.

Saari said there is "no reason to believe the work is bad," but said Consumers has decided the problems are potentially reportable as construction or paperwork deficiencies. The utility is to report back to the NRC in 30 days with more information.

PORTIONS OF THE HVAC system are safety-related because, among other functions, they are designed to provide a habitable atmosphere for control room operators during a radiation release accident.

Proper functioning of the Midland HVAC system is more critical than at some other nuclear plants, according to the NRC, because it also must protect operators from a possible chemical release at Dow Chemical Co., located just across the Tittabawassee River from the nuclear plant.

Saari said welding is continuing on some HVAC systems which are not safety-related, such as those in the plant's turbine building.

Daily News

Friday, July 22, 1982, Midland, Michigan 25¢ Per Copy

Fired Zack workers claim coverup in quality control

By PAUL RAU
Daily News staff writer

Four former employees of the Zack Corp. have charged that the nuclear plant vendor attempted to cover up a widespread breakdown in documentation for safety-related components supplied to three nuclear plants, among them the Midland nuclear plant.

The four, who went public with their allegations on a Chicago television station Thursday night, claim they were fired from their jobs in Zack's Quality Assurance (QA) documentation section after they reported the breakdown to Consumers Power Co. officials at the Midland plant.

Documents indicate Consumers became aware of the QA breakdown in an October 1981 report from Zack, but decided against reporting the problems to the U.S. Nuclear Regulatory Commission.

The NRC, which became aware of the problems at Zack in May of this year, took no action until this week after being prodded by an official for the Government Accountability Project (GAP), which has offered legal representation to the four former Zack employees.

The NRC began an investigation Thursday at the LaSalle nuclear plant in Illinois to see if ductwork supplied by Zack meets federal codes, and the agency said the probe may spread to the Midland plant.

THE FOUR persons, all of them new to the nuclear field, were hired by Zack around October 1981 to clean up, as one of the four put it, a "horrendous mess" of documents at Zack's headquarters in Chicago. Specifically, they said they were to create a filing system and to group purchase orders with certifications showing that the materials sold by Zack to the three utilities were suitable for use in nuclear plants.

What they found, two of the four said, was that many documents were missing and that thousands more had been altered, retyped, whited-out or otherwise falsified by other Zack employees before the QA documentation section was created to deal with the problem.

Shortly after the persons reported the problems to Consumers through the Midland Project Quality Assurance Department (MPQAD), the entire four-person documentation team was dismissed by Zack on April 23.

The official reason was "departmental reorganization," but the four claim they were fired as reprisal for attempting to correct Zack's massive paperwork problems. At least one of them, the father of 16 children who is now out of work, said he is considering filing suit against Zack.

The four are Albert T. (Terry) Howard, Sharon Morell, Mark Cisloni and Charles Grant. All live in the Chicago area and were featured in a special two-minute report broadcast Thursday night on Chicago's channel 5, an affiliate of NBC. The report, broadcast throughout Chicago area, is to be complemented tomorrow by the station, and the report may be picked up by NBC for nationwide use.

The information in this article was compiled from a notarized affidavit sworn to by one of the four employees, Daily News telephone interviews with that person and some of the others in the group and a variety of documents that apparently passed between Zack, Consumers, Bechtel Power Corp. and vendors that supplied materials to Zack. Copies of the latter documents were obtained by the four whistleblowers and given to the Daily News by GAP.

GAP, which protects and represents persons who blow the whistle on fraud and abuses, said it cautioned the four that going public with their allegations could jeopardize their careers, but GAP said they decided to speak out due to the magnitude of the problems they found at Zack.

HOWARD, 42, the father of 10, said in his affidavit, "It is intolerable to my conscience as a father, a citizen and an employee to let problems of this magnitude go unreported."

He said that because some materials ordered by Zack did not meet federal specifications, the installation of ductwork in the three nuclear plants may have "critical implications for the health and safety of residents in the surrounding metro communities." Those are Midland, Seneca, Ill. in the case of LaSalle and Clinton, Ill., for the Clinton nuclear plant.

"I am committed to exposing the full extent of this fiasco until these nuclear plants are entirely rechecked and certified as safe by trustworthy, independent third parties," he said.

Shortly after the QA documentation section was formed, Howard was installed as its supervisor. He said that at first the activities of his group were a "paperwork shuffle" to keep the NRC from realizing the "horrible extent" of Zack's documentation breakdown. At the worst, he said the falsified documents may represent a criminal coverup by Zack.

Submitting falsified documents to a federal agency, such as the NRC, is a violation of federal law. Neither the NRC nor any other law enforcement or regulatory agency has confirmed that such violations were committed by Zack.

In 1981, a similar case involving Zack was nearly sent to the U.S. Department of Justice for criminal prosecution. NRC officials said then that paperwork violations had been committed, but that the case was not strong enough to warrant the Justice Department's attention.

Howard said in his sworn statement, which is to be sent to the NRC, "It is a fact that the history of the Zack Corp. in nuclear contracting is full of mistakes, bunglings and felonious misstatements related to material traceability, material certification, vendor certification, qualification of quality control personnel and most importantly, the purchase and supply of hardware used in the construction of nuclear facilities."

HOWARD SAID the first step in the Zack "coverup" began in-house before the QA documentation section was formed, and in addition to other alterations included forged "stickers" applied to material certifications.

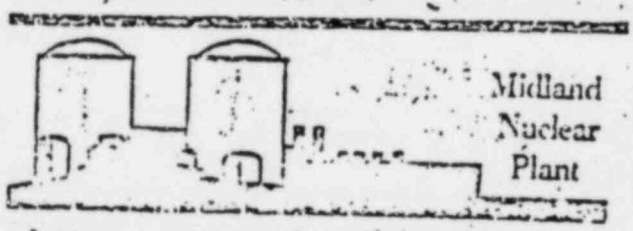
In a telephone interview, Howard refused to name the Zack personnel who did the forging and alterations other than to say the persons are in "upper management." He said, "We know who it is, but we did not find it necessary to put a finger on them. The Justice Department will take care of that."

The next step in the coverup, Howard said, was an effort to correct altered or missing documents by sending letters to various vendors asking them to certify that materials they supplied to Zack were suitable for safety-grade nuclear plant systems.

Some vendors never answered. One which did said Zack had not ordered safety-grade components in the first place.

In a letter dated Sept. 21, 1981, U.S. Steel Supply, a division of the U.S. Steel Corp., gave this reply to Zack: "These orders were not called in to our salesperson as 'Safety Related.' Therefore, they were handled in our normal procedure and not run through our V&T (verification and testing) program ... Please advise us what is meant by the term 'Safety Related' and what obligation if any does this impose on the supplier."

The letter indicated U.S. Steel Supply had sent Zack 26 orders of materials between December 1980 and May 1981.



DOCUMENTS SHOW that on Oct. 23, 1981, Zack notified Consumers that the paperwork problems were potentially reportable to the NRC under part 50.55(e) of the Code of Federal Regulations. The report began, "There has been a breakdown of the quality assurance program" for document control.

Federal regulations require that utilities building nuclear power plants report any significant deviations from federal codes to the NRC.

Zack said in the report that "unauthorized personnel" had gained access to the documents and made "improper modifications." Zack said in the report, "These errors and

Continued on page 3

Attachment #4

TO ALL PLANT ASSURANCE DIVISION PERSONNEL

FROM HPLeonard

DATE June 9, 1983

SUBJECT MIDLAND ENERGY CENTER - ORGANIZATIONAL REALIGNMENT
FILE: 1.1 SERIAL: 12702

Consumers Power Company

INTERNAL CORRESPONDENCE

CC (see distribution list)

The purpose of this memo is to announce the realignment of functions and resources within what is currently the HVAC QA and BOP QA areas. Effective June 13, 1983, the HVAC QA and BOP QA areas collectively become the Plant Assurance Division (PAD) of the Midland Project Quality Assurance Department (MPQAD). The PAD consists of three major elements: the HVAC Assurance (HVACA) Subdivision, the Plant Assurance Programs (PAP) Subdivision and the Plant Assurance Engineering (PAE) Section. The basic PAD organization is shown in Attachment 1 to this memo.

HVAC Assurance Subdivision

The HVAC Assurance Subdivision is organized as shown in Attachment 2 to this memo. John L (Chip) Wood is appointed Assistant Superintendent, HVAC Assurance Subdivision, and reports to me.

Michael J (Mike) Schaeffer is appointed Section Head, HVAC Assurance Engineering and Verification Section, and reports to Chip Wood. William F (Bill) Heiberger continues as Supervisor, HVAC Assurance Engineering Group and reports to Mike Schaeffer. James S (Jim) Gallivan continues as Supervisor, HVAC Verification Group, and reports to Mike Schaeffer.

The HVAC "IE & TV" Section is renamed the HVAC Inspection Section. James L (Jim) Zimmerman continues as Section Head and reports to Chip Wood. Ronald W (Ron) Miller, Frederick J (Fred) Lounds and David S (Dave) Haas continue as HVAC Inspection Group Supervisors and report to Jim Zimmerman.

Sondra K (Sandy) Cox continues as Supervisor, HVAC Administration Group and reports to Chip Wood.

Plant Assurance Programs Subdivision

The Plant Assurance Programs Subdivision is organized as shown in Attachment 3 to this memo. David A (Dave) Taggart is appointed Assistant Superintendent, Plant Assurance Programs Subdivision, and reports to me.

T K Subramanian continues as Section Head, Turnover and Test Assurance Section, and reports to Dave Taggart. John Yatchuk continues as Supervisor, Test Assurance Group and reports to T K Subramanian. Alan R (Al) Gort continues as Supervisor, Turnover Assurance Group, and reports to T K Subramanian.

Kermit J Gill continues as Supervisor, Technical Services Group and reports to Dave Taggart.

Brien M Palmer continues as Supervisor, Verification Programs Management Group, and reports to Dave Taggart. The Verification Programs Management Group is responsible for management of the Quality Verification Program, the Hanger Reinspection Program and completion of the Cable Reinspection Program.

Lee R Howell is appointed Supervisor, Inspection Evaluation Group, and reports to Dave Taggart. The Inspection Evaluation Group will implement a new program to continuously measure the performance of the inspection system (planning, training, inspection). This program will replace the present "overinspection" program. Lee's initial assignment is to recommend an implementation plan and resource requirements. The final structure and staffing of this function will be based on Lee's recommendations. Edward L (Ed) Jones and Donald A (Don) Nott will assume staff assignments temporarily to assist Lee.

Plant Assurance Engineering Section

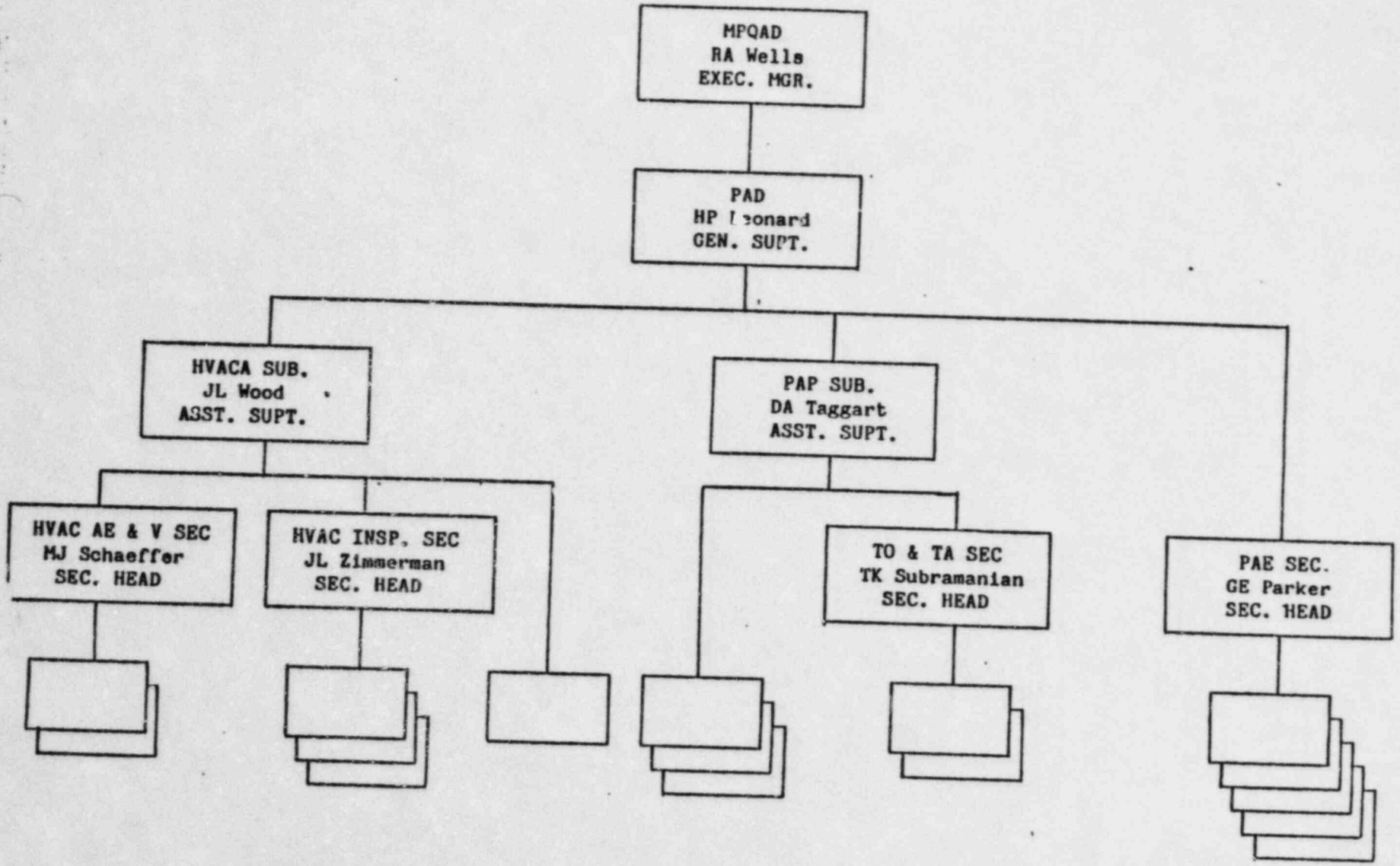
The Plant Assurance Engineering Section is formed and assumes the functions now performed by the "QAE" and "IE & TV" groups within BOP-QA. When the new Inspection Evaluation Program becomes effective, the PAE Section will no longer conduct overinspections. The PAE Section is comprised of five discipline oriented Assurance Engineering Groups as shown in Attachment 4 to this memo.

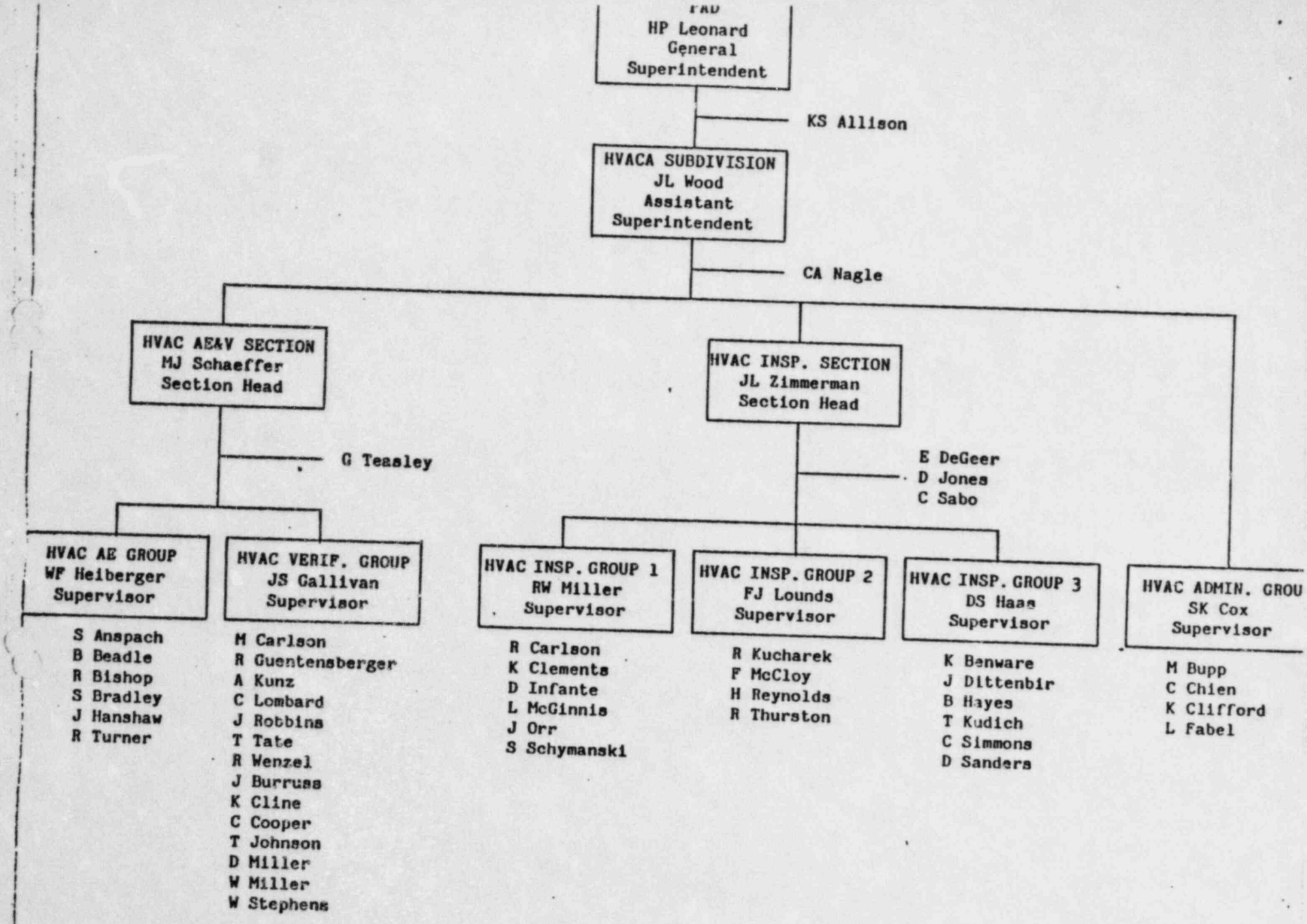
Geoffrey E (Jeff) Parker is appointed Section Head, Plant Assurance Engineering Section, and reports to me. Robert D (Bob) Davis continues as Supervisor, Welding and NDE Assurance Engineering Group. James A (Jim) Pastor is appointed Supervisor, Instrumentation and Control Assurance Engineering Group. Harry J Perrine continues as Acting Supervisor, Electrical Assurance Engineering Group. Henry P Nunes is designated as Acting Supervisor, Civil Assurance Engineering Group. Robert F (Bob) Williams is designated Acting Supervisor, Mechanical Assurance Engineering Group. Bob Davis, Jim Pastor, Harry Perrine, Henry Nunes and Bob Williams report to Jeff Parker.

By copy of this memo Gary Ewert is requested to revise procedures, rosters and organizational charts to reflect the above.

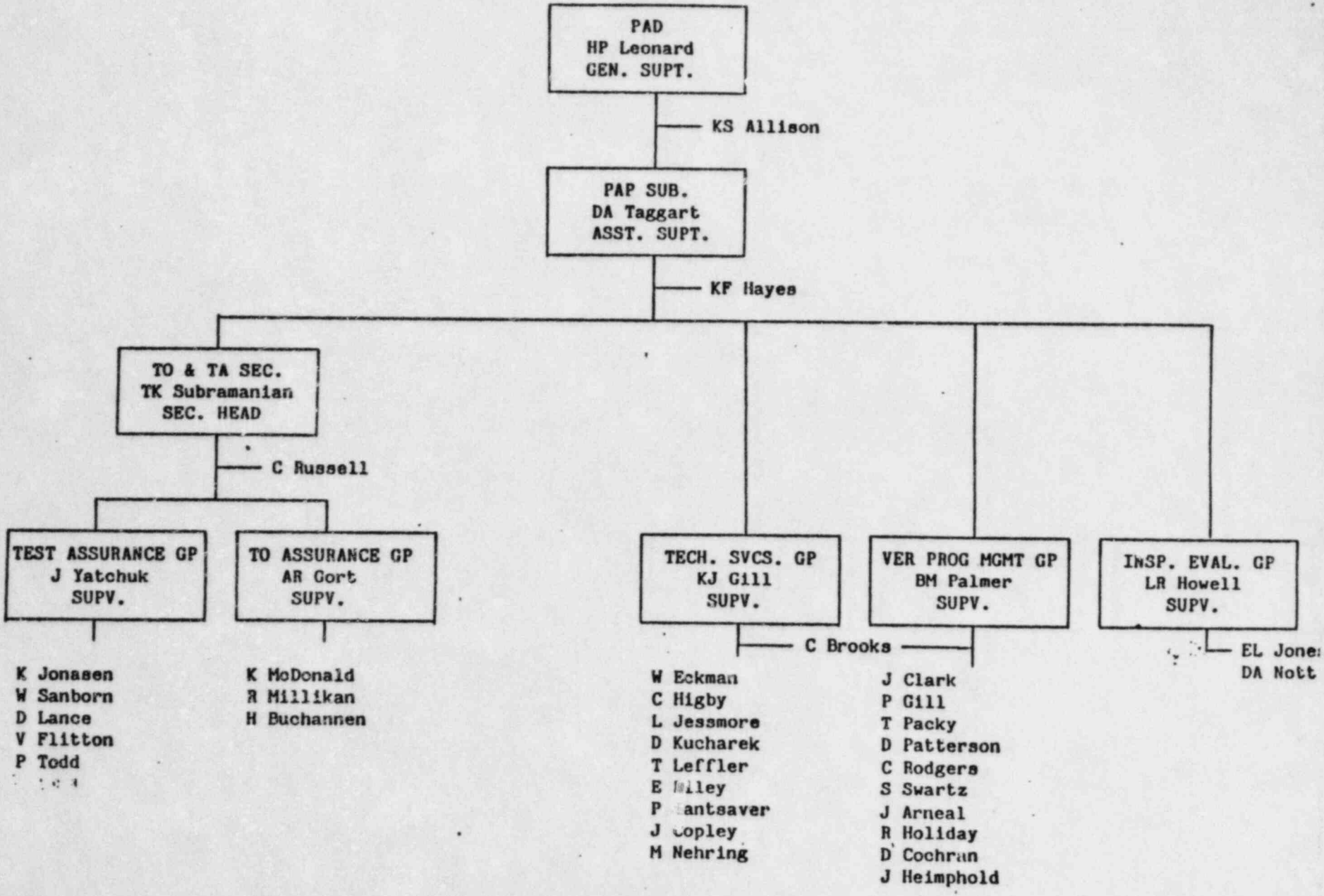
HPL/ksa

Attachment No. 1

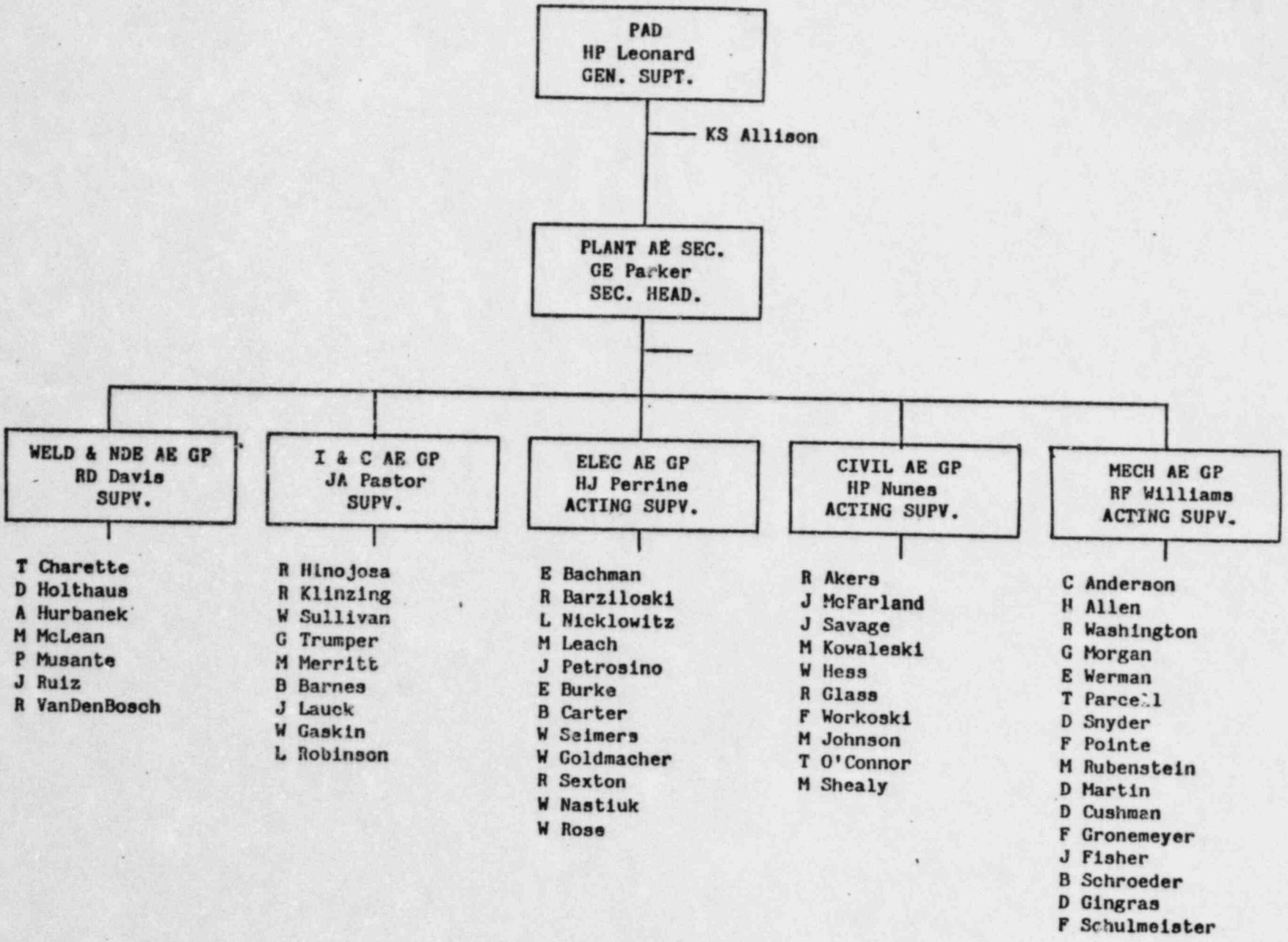



HP Leonard
General
Superintendent
KS Allison
HVACA SUBDIVISION
JL Wood
Assistant
Superintendent
CA Nagle
HVAC AE&V SECTION
MJ Schaeffer
Section Head
G Teasley
HVAC AE GROUP
WF Heiberger
Supervisor
S Anspach
B Beadle
R Bishop
S Bradley
J Hanshaw
R Turner
HVAC VERIF. GROUP
JS Gallivan
Supervisor
M Carlson
R Guentensberger
A Kunz
C Lombard
J Robbins
T Tate
R Wenzel
J Burruss
K Cline
C Cooper
T Johnson
D Miller
W Miller
W Stephens
HVAC INSP. SECTION
JL Zimmerman
Section Head
E DeGeer
D Jones
C Sabo
HVAC INSP. GROUP 1
RW Miller
Supervisor
R Carlson
K Clements
D Infante
L McGinnis
J Orr
S Schymanski
HVAC INSP. GROUP 2
FJ Lounds
Supervisor
R Kucharek
F McCloy
H Reynolds
R Thurston
HVAC INSP. GROUP 3
DS Haas
Supervisor
K Benware
J Dittenbir
B Hayes
T Kudich
C Simmons
D Sanders
HVAC ADMIN. GROU
SK Cox
Supervisor
M Bupp
C Chien
K Clifford
L Fabel

Attachment No. 3



Attachment No. 4



- Attachment #5

MIDLAND INDEPENDENT DESIGN AND CONSTRUCTION VERIFICA
OPEN, CONFIRMED AND RESOLVED (OCR) ITEM REPORT

TYPE OF REPORT: OPEN _____ CONFIRMED X
RESOLVED _____ ITEM

FILE NO. 3201-008
DOC NO. 3201-008- C. 031
REV. NO. 0

DATES REPORTED TO: LTR 3/3/83 SRT _____ PROJECT TEAM/PROJECT MGR. 3/3/83
PRINCIPAL-IN-CHARGE 3/7/83 CPC/DESIGN ORG. _____

STRUCTURE(S), SYSTEM(S), OR COMPONENT(S) INVOLVED:
AFW System Pipe Supports

IDCV PROGRAM AREA OR TASK (IF APPLICABLE):
Topic I.3.1c - Pipe Supports
Verification of Physical Configuration

DESCRIPTION OF CONCERN:
Refer to OCR's C-32 thru 35, same program area as above, for description of four hangers field measured by TERA to be out of installation tolerance limits.

SIGNIFICANCE OF CONCERN:
The construction deviation control process is not functional.

RECOMMENDATION X OR RESOLUTION _____:
1. Review further the construction deviation control process to determine extent of breakdown.
2. Process per Project Quality Assurance Plan.

COMMENTS BY SRT (IF REQUIRED):

REFERENCES (INCL. RELATED OCR ITEM REPORT NO.):
Dwg 7220-H-639 SH 14 (Q), Rev 11
Spec 7220-M-326 (Q) Rev 8 "Install., Inspect. & Doc. of Pipe Supports"

SIGNATURE(S):

CS	CS	HAL	JWB	N/A JWB
OCR ITEM REPORT ORIGINATOR	LTR	PROJECT MANAGER FOR PROJECT TEAM	PRINCIPAL-IN-CHARGE	SRT (IF REQUIRED)
3/3/83	3/3/83	3/4/83	3/14/83	
DATE	DATE	DATE	DATE	DATE

Attachment #6

Meeting between NRC and Consumers Power Company
(2/8/83)

Opening Remarks

Good morning ladies and gentlemen. We are meeting here today to review Consumers Power Company's planned Construction Completion Program for the Midland Nuclear facility. This meeting is being held in front of the public because of the overall public interest that has been shown in the Midland project in general and identified quality assurance and construction problems in particular and is consistent with our established practice of holding meetings of this type permitting public attendance. While we welcome attendance by members of the public and the news media, I wish to emphasize that this is a meeting between Consumers Power Company and NRC, and involves public participation only through observation. Following this meeting the NRC will be glad to hear comments or respond to questions from the public concerning the subject matter of the meeting or other areas of interest concerning the Midland project and further opportunity for discussion by the public will occur tonight for those persons who could not attend this meeting. In addition to the two public meetings, a few of the NRC people and myself will be meeting this afternoon with senior representatives of Consumers Power Company and Bechtel corporation at the Midland construction site. This meeting is being held at their request to discuss the perceived importance of some of the specific problems identified by the NRC inspections last fall and to discuss Region III's handling of certain inspection findings relative to the approaches used by other NRC regions. That meeting will not get into the details of this morning's meeting.

I'd like to start by having the NRC people who are present here today to introduce themselves and then ask Consumers Power and their representatives to introduce themselves.

By way of background, for benefit of the public, Mr. Eisenhut and myself met with Mr. Selby and Mr. Cook of Consumers Power Company on two occasions in early September of last year to discuss renewed NRC concerns regarding the effectiveness of the quality assurance program at Midland. These meetings were an outgrowth of a detailed review and evaluation by members of my staff, attempting to assess the reasons why the quality assurance program was not effective in the early identification, correction and prevention of problems. Consumers Power Company was told that we believed their QA program was basically sound, but that the implementation of that program resulted in a number of problems. While we were unable to pinpoint the specific reasons for these implementation problems, we did share with Consumers Power management certain practices we believed warranted change. Furthermore, we told them that comprehensive programs needed to be developed and put into place in order to: (1) Provide assurance that completed construction work was sound, and (2) Provide assurance that future work would be effectively controlled. We requested CPCo to develop a program to deal with NRC's concerns and to sumbit that program for review by the staff.

with the remedial soils work and one dealing

On September 17, 1982, CPCo submitted two letters to the NRC --- one dealing with the remainder of the safety related work. A supplemental submittal was made on October 6, 1982. Two meetings, both open to the public, were subsequently held in Washington between NRC and CPCo to discuss these submittals. Concurrent with this review effort, my staff conducted an in-depth inspection of the civil, mechanical, and electrical work associated with the diesel generator building. This inspection effort identified a number of substantive quality assurance problems and led Consumers Power Company to conduct similar inspections of other plant areas. Those inspections by CPCo disclosed similar QA problems. These combined inspection findings, in conjunction with CPCo's overall assessment of the status of the project, resulted in CPCo's halting a large amount of safety related work at the Midland site and to develop a formalized Construction Completion Program for completing the Midland Project. We subsequently requested CPCo to tie together this program with their earlier submittals regarding proposed quality improvements into a single package. We also committed to have a public meeting to obtain the comments of concerned citizens and organizations once that program had been submitted to the NRC. This program was submitted by CPCo on January 10, 1983, and serves as the focal point for the meetings today.

With that status, I would now like to turn over the meeting to Mr. Selby.

Hundreds at nuclear plant session

Federal nuclear officials wanted comments on the Midland nuclear plant from Midland area residents Tuesday night, and they got an earful.

It was a night when the motives of citizen intervenors and the credibility of Consumers Power Co. both were questioned, along with the motives of the U.S. Nuclear Regulatory Commission for holding the public meeting in such a small room.

A crowd that might have contained up to 400 persons overflowed Conference Room E at the Quality Inn, where utility and regulatory officials had gathered to field questions. The room is designed to hold 225 persons, and perhaps 150 or more spent two and a half hours standing outside three doorways and listening.

Applause was showered nearly equally on those expressing pro- and anti-nuclear sentiments, with the crowd perhaps favoring persons who said they want the plant to open.

But even Mary Sinclair, well-known in Midland for opposition to the plant, left the podium to cheers when she concluded her statement saying she hopes the growing awareness of the nuclear plant in the Midland community continues.

SISTER ARDETH PLATTE, representing the Saginaw City Council, led off the night by asking who will guarantee the nuclear plant's safety, and whether planned third-party audits of the plant's construction quality will be truly independent.

Darrell Eisenhut, director of the NRC's Division of Licensing, said no one can guarantee the plant's safety. "All we can do is assure there is a sufficiently low risk from the plant. That responsibility principally lies with the utility," he said.

Eisenhut said the NRC's precautions to make sure workers conducting the quality audits are not connected to Consumers include prohibitions on stock ownership and a requirement to sign certificates stating they or their families have not and do not work for the utility.

Sister Ardeth told him the $120,000 fine levied on Consumers Power Tuesday by the NRC is a "slap on the wrist in comparison with what happens if the plant is not constructed safely."

Thomas Herron, chairman of the anti-nuclear Lone Tree Council, said he's lost confidence in the NRC and that "even the most avidly pro-nuke zealots are embarrassed" by the condition of the Midland plant.

In answer to Herron's question, Consumers Power vice president James W. Cook said that in no case has any fine levied on the utility been passed on to ratepayers.

The fine isn't much punishment because Consumers Power is such a large utility, said NRC Region III Administrator James G. Keppler. But he claimed the "public embarrassment" caused by such fines acts as a deterrent.

THEN COMPLAINTS began about the crowded room. One man said an emergency evacuation would create a disaster because the room's three exits all were blocked, and another compared the NRC's lack of action on the complaint to the agency's regulatory performance.

That man also claimed the NRC was trying to discourage public participation in the meeting by choosing a small room.

Keppler apologized for the overcrowding, and said the NRC did not expect the large turnout.

THOMAS DEVINE, legal director of the Government Accountability Project (GAP), a Washington-based group investigating the nuclear project, read and then gave the NRC an affidavit in which plant worker Richard Letherer claimed that the NRC colludes with Bechtel Power Corp. by revealing the time and subject of supposedly unannounced inspections.

A number of NRC officials denied that allegation, but promised to check into it.

PRO-NUCLEAR viewpoints then emerged, with one man saying that the nuclear industry's problems are not insurmountable and that Consumers Power is "definitely on the right track" in correcting problems at the Midland plant.

The pro-nuclear position was perhaps best expressed by Midland resident Tracy Parsons, who said in a reference to GAP that "Midland seems to be suffering from an infusion of outside interest groups operating under the pretense of being watch-dog groups."

Parsons added, "GAP does not represent the view of Midland. I believe nuclear plants can be built and operated safely."

John Catenacci, a Dow Chemical Co. engineer, claimed that no one inside Dow "believes in" Consumers Power any longer. He said he doesn't know if that feeling is deserved, but stressed that assurances of the plant's quality must be provided by third-party, independent reviews of the plant.

"I really don't think you're going to get any more credibility out of this community" without such proof of the plant's proper construction, he added.

Mrs. Sinclair countered claims that her intervention in the licensing process has delayed the nuclear project, saying delays associated with the soil hearing and the recent halt of safety-related work are the utility's own doing.

GAP official Billie Garde denied that the group is trying to shut the Midland plant. She blamed the project's troubles on work supervisors, and said the bottom line is that "Consumers has not been able to implement their plans, no matter how well they work."

Keppler closed the meeting by noting the large attendance and said the NRC will "seriously consider" conducting another evening meeting.

CONSUMER'S COOK was asked after the meeting to respond to the comments that his company now lacks credibility among Midlanders.

"We'll have to let our actions and activities in completing the plant speak for themselves," Cook said.

Later, he said he worries that the public may not be getting a complete understanding of the many complex issues associated with the plant.

"It clearly evident there is a considerable amount of confusion in the public mind, based on the number of extremely complex technical, procedural and political currents in the discussions going on in public.

"We have been unable to articulate clearly what's going on out here. I believe we've contributed to the confusion," Cook added. He pledged to renew the utility's efforts to communicate with the public and media.

By PAUL RAU

Attachment #7

QA problem still puzzles Keppler

Related story, page 3

By PAUL RAU
Daily News staff writer

A special inspection team of the U.S. Nuclear Regulatory Commission still does not know why Consumers Power Co. has trouble making its own Quality Assurance program work at the Midland nuclear power plant, NRC regional administrator James Keppler testified here Monday.

Keppler, who formed the special NRC team, said: "I simply know their (Consumers') quality assurance program has not worked the way it should."

A lawyer said Consumers is unable to find and fix its own problems, and that the NRC doesn't have the muscle to force the correct building of the Midland plant.

Lynne Bernabei, who represents citizen intervenor Barbara Stamiris, made those comments after her day-long questioning of Keppler, NRC Region III administrator, during the Midland plant's licensing hearing.

Keppler testified, however, that the NRC does have enough "manpower" to make sure the Midland plant is built properly, even though his top inspectors have testified they have too much work to do in too little time and that they may not be finding all the plant's problems.

While Keppler said that past quality assurance breakdowns at the Midland plant have proved that "I'd be a fool to blindly trust" Consumers alone to finish building the plant and correcting its foundation problems, he said he is confident that independent, third-party reviews of the plant's quality assurance will assure its safe operation.

"The NRC is insisting on it that an extensive program will be put in place to verify the quality of the plant before an operating license is issued," he said.

"If those activities are carried out properly, there should not be a health and safety concern," he added.

MS. BERNABEI TOLD reporters after Monday's hearing that she proved that Consumers lacks the character and competence to build and operate the Midland plant.

"It was obvious (from testimony) that all of the action Consumers has taken to respond to QA problems at the site has been due to the shoving and the insistence of the NRC. It has not been done on Consumers' own initiative," Ms. Bernabei said.

She said the inability of Consumers to bring its QA programs up to the NRC's expectations "demonstrates poor management attitude. Consumers Power is unable to recognize its own problems and reform itself."

Keppler had no evidence to that statement, both in testimony and statements to the Daily News. He began saying publicly last summer that he is mystified why quality assurance is poor at the Midland plant, and Monday he said he still hasn't found the answer.

Keppler told the Daily News that the NRC is hard to please, but that other utilities in Region III — which includes 15 nuclear units under construction in eight states — have done a "more credible job" of meeting QA regulations. None are completely acceptable, he said, but Midland still ranks on the "low end of the scale."

HERE ARE EXERPTS from Keppler's testimony:

- He shares his inspectors' distrust of Consumers in the sense he doesn't have confidence in the utility.
- The utility "simply has not instilled the message of doing the job right the first time rather than trying to inspect quality into the job."
- The managements of both Consumers and Bechtel Power Corp., the prime contractor, are "ineffective" in assuring attention to detail.
- Keppler agreed with Ms. Bernabei that Consumers is performing more poorly than before because in the past, the utility has been able to identify its problems. The late-1982 inspection of the plant's diesel generator building showed problems are continuing.

The NRC inspected the diesel building because most of the work in it is very recent. So many problems were found that the NRC urged Consumers to take action. On Dec. 2, the utility laid off more than 1,000 manual workers, halted most safety-related construction and began reinspecting the work.

THE CONSTRUCTION COMPLETION Plan for the Midland plant, unveiled this January by Consumers, also was criticized by Ms. Bernabei. The plan calls for the layoffs, reinspection program, rehiring and completion of the plant, and also a series of third-party audits to assure quality construction.

She said the plan "has never been proposed to the public as anything but an initiative of Consumers', and that's simply not true."

The NRC force-fed the "get-well" plan to Consumers under the threat of a virtual work halt if quality doesn't improve, she said.

Work to improve the plant's foundation was allowed by the NRC, Ms. Bernabei said, even though the inspection of the diesel generator building showed QA deficiencies with soil work.

And the NRC partly based its approval for a portion of the foundation work on advice and reports from an engineering firm (Stone & Webster) performing an oversight role, even though the NRC had not at that time approved the choice of the firm for that role, she said.

She said part of the quality verification effort will depend on "Consumers' willingness and ability to identify problems" and noted that Keppler's inspectors "have testified they have no confidence in Consumers' ability to do that."

Midland Nde

Attachment #8

NRC inspector urges n-plant housecleaning

6-2-83

By JAMES ISELER
Daily News staff writer

Six Midland nuclear plant engineers, including two top-level managers, should be replaced because they are unqualified or have attitude problems, a federal inspector said Wednesday.

U.S. Nuclear Regulatory Commission inspector Ross Landsman told a federal licensing panel that "the site would run a lot easier without them there."

Among the men Landsman named were Roy A. Wells, executive manager of the Midland Project Quality Assurance Department; James Meisenheimer, superintendent of MPQAD soils work; and Dick Oliver, section head for soils work quality assurance.

Landsman also named James A. Mooney, executive manager of soils work; John Schaub, assistant project manager for soils work; and John Fisher, underpinning contracts manager. Except for Fisher, who works for Bechtel Power Corp., the men are employees of Consumers Power Co. which owns the plant.

"You've gotta have somebody responsible for what the people under them do," said Landsman, a member of the Midland Section of the NRC's Office of Special Cases.

Four other NRC officials said they did not think anyone should be replaced, although one said he was "concerned" with the attitudes of some managers.

Former Midland Section head Wayne D. Shafer said inspectors have suggested replacing certain Consumers employees, but the section has taken no formal action.

"None of us have gone to our management and said 'Get rid of X, Y, and Z,'" Shafer said.

However, Shafer said there has been an "argumentative" attitude from some Consumers managers in the past that extends up to James Cook, vice president for the Midland project.

THE PANEL was answering a question from Atomic Safety and Licensing Board Chairman Charles Bechoefer, who said later that he asked the questions to help "pinpoint why some of the work isn't as good as it should be."

Consumers attorney Michael Miller said he was "uncomfortable" that the men were named on the record.

"After all, these are men's careers we're talking about," Miller said.

Citizen intervenor Barbara Stamiris then stated that "we're talking about people's lives with this nuclear plant."

Consumers spokesman Norman Saari said that since the charges were made in a hearing, "any additional discussion from us will come up in the hearing room, not in the public or in the media."

Landsman's testimony came during the first day of the latest round of hearings to determine if work to fix soil problems at the plant is being done adequately.

The hearings will continue through next week at the Quality Inn, 1815 South Saginaw. They are open to the public.

THREE OF the men Landsman named work for MPQAD, which oversees quality assurance at the plant. Quality assurance is a series of checks and inspections to insure the plant is built according to NRC requirements.

Although the MPQAD workers' resumes indicate they may be "technically" qualified to perform their jobs, Landsman said they did not have enough experience actually administering QA.

The NRC's senior resident inspector, Ronald Cook, said he thought Wells was qualified to direct MPQAD "as long as he's surrounded by people with more experience."

The three men named from the soils area should be replaced because of "misunderstandings" between themselves and the NRC inspectors, Landsman said.

Although he could not name any specific examples, Landsman said he has been told by Consumers engineers that a job was performed one way then would find out later they "did a 180-degree turn."

Concern over "cost and schedule is the common thread with all these misunderstandings," Landsman said. "Quality is taking a back seat all the time."

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE--PNO- [illegible] DATE: DECEMBER 1, 1982

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

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

Licensee Emergency Classification:
_____ Notification of Unusual Event
_____ Alert
_____ Site Area Emergency
_____ General Emergency
__xx__ Not Applicable

Subject: INADEQUATE QUALITY ASSURANCE FOR HVAC WELDER CERTIFICATION AND PROCEDURE QUALIFICATION

All safety-related welding on the heating, ventilating and air conditioning (HVAC) was stopped November 30, 1972, after it was determined by the licensee that the quality assurance program for welder certification and procedure qualification was inadequate.

A licensee QA audit of Photon Testing, Inc., which performed testing of weld samples used in certifying welders and welding procedures, determined that the contractor did not have an adequate quality assurance program. Photon Testing has subsequently been removed by the licensee from the list of approved Midland vendors.

As a result of the audit findings, the HVAC contractor, Zack Company, has discontinued all welding on safety-related HVAC systems, laying off 151 crafts workers. Zack also discontinued the certification of new welders and withdrew all safety-related weld procedures.

The Photon Testing has performed testing services for HVAC welder and procedure qualifications since 1980.

Region III (Chicago) personnel are on site and will monitor the licensee's program to address the qualification of the Zack welders and procedures and to assess the quality of the completed HVAC welding work.

There has been local news media interest in the quality assurance problems and resulting layoffs. Region III will continue to respond to news inquiries.

The State of Michigan will be notified.

The licensee reported the quality assurance inadequacies and HVAC worker layoffs as a potential 50.55e construction deficiency to Region III personnel at the site at 2 p.m., (EST), December 1, 1982. This information is current as of that time.

Contact: R. Gardner 384-2524 — W. Shafer 384-2656 — R. Warnick 384-2599

DISTRIBUTION:

H. St._____	MNBB_____	Phillips_____	E/W_____	Willste_____
Chairman Palladino	EDO	NRR	IE	NMSS
Comm. Gilinsky	PA		OIA	RES
Comm. Ahearne	MPA		AEOD	
Comm. Roberts	ELD	Air Rights_____		MAIL:
Comm. Asselstine		SP	INPO_____	ADM:DMB
SECY			NSAC_____	DOT: Trans Only
ACRS	Applicable Resident Site _____			
CA				
PDR	Regions I_____, II_____, IV_____, V_____		Licensee (Corporate Office)_____	

Rev. 11/19/82

8212060112

Attachment A

(K-1)

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

June 21, 1982

MEMORANDUM FOR: James G. Keppler, Regional Administrator

FROM: C. E. Norelius, Director, Division of Engineering and Technical Programs
R. L. Spessard, Director, Division of Project and Resident Programs

SUBJECT: SUGGESTED CHANGES FOR THE MIDLAND PROJECT

Historically, the Midland Project has had periods of questionable quality assurance as related to construction activities and has had commensurate regulatory attention in the form of special inspections, special meetings, and orders. These problems have been given higher public visibility than most other construction sites in Region III. As questions arise regarding the adequacy of construction or the assurance of adequate construction, we are faced with determining what regulatory action we should take. We are again faced with such a situation.

Current Problem

The current problem was caused by a major breakdown in the adequacy of soils work during the late 1970's. Because of the increased regulatory attention given the site, we expect that exceptional attention would be given to this activity and that licensee performance would be better than other sites or areas which have not had such significant problems and therefore have not attracted this level of regulatory attention. However, that does not appear to be the case and Midland seems to continually have more than its share of regulatory problems. The following are some of the specific items which are troublesome to the staff.

Technical Issues

1. In the remedial soils area, the licensee has conducted safety related activities in an inadequate manner in several instances - removal of dirt around safety related structures, pulling of electrical cable, drilling into safety related utilities.

NOS 11/9/82
7D

8306210282 5pp

2. In the electrical area, in trying to resolve a problem of the adequacy of selected QC inspectors' work conducted in 1980, the licensee completed only part of the reinspection even when problems were identified, and appears inclined to accept that 5% of electrical cables may be misrouted (their characterization of "misrouting" may imply greater significance than we would attach to similar findings).

3. In the pipe support area, in trying to resolve a problem of the adequacy of QC inspections conducted in 1980, the licensee has portrayed only a small percentage of defects of "characteristics" identified and has not addressed the findings in terms of a large percentage of snubbers which may be defective because of the characteristics within each snubber that may be defective (e.g., if only one characteristic was defective out of 50 reviewed on a single hanger, the percentage is small; but if the one defective characteristic makes the hanger defective the result would have a much greater significance level). The licensee had done a detailed statistical analysis in an attempt to show that the small percentage of characteristics were found rather than broadly approaching the problem with significant reinspections to determine whether or not construction was adequate.

Communications

Multiple misunderstandings, meetings, discussions, and communications seem to result in dealing with the Midland Project. Some examples are:

1. NRC staff attending a meeting in Washington on March 10, 1982, heard the Consumers Power Company staff say that electrical cable pulling related to soils remedial work was completed. It was determined to be ongoing the next day at the site.

2. When Region III attempted to issue a Confirmatory Action Letter, J. Cook informed W. Little of his understanding that both J. Keppler and H. Denton had agreed that the subject of the CAL was not a safety related item subject to NRC regulatory jurisdiction. Such agreements had not in fact occurred and following a meeting, Consumers Power Company issued their commitments in a letter to Region III.

3. In reviewing a licensee May 10, 1982 letter, responding to the Board Order, the NRR staff had an unsigned letter and Region III had a signed copy both dated the same date but differing in content.

4. Recently a Region III inspector in closing out and exiting from his inspection described the exit meeting as being the most hostile he had ever participated in.

5. The responses to any Region III enforcement letters issued to Midland are more lengthy and are argumentative than are any other responses from any other licensee in Region III. This point was made in the SALP response provided by Midland, and the SALP response in itself from Midland is an example of the type of response which we commonly receive from the site. The length of the response is at least as long as the initial SALP report.

6. Multiple requests for briefing meetings and other statements by the utility to the effect that we should review procedures in developmental stages imply that Midland wants the NRC to be a part of their construction program rather than having us perform our normal regulatory function.

Staff Observations

1. With regard to corrective actions of identified noncompliances, the Midland response seems to lean towards doing a partial job and then writing up a detailed study to explain why what they have done is sufficient rather than doing a more complete job and assuring 100% corrective action has occurred. In the detailed writeups that are prepared, it is the staff's view that the licensee does not always represent the significance properly, and the analyses and studies often raise more questions than they solve; thus time appears to have been wasted in writing an analysis rather than in fixing the problem.

2. Midland site appears to be overly conscious with regard to whether or not something is an item of noncompliance and spends a lot of effort on defending whether or not something should be noncompliance as opposed to focussing on the issue being identified and taking corrective action. This appears in part to be due to their sensitivity of what appears in the public record as official items of noncompliance. This sensitivity may have resulted from the extended public visibility which has attended construction of the facility. The staff's view is that the Midland site would look better from the public standpoint and be more defendable from NRC's standpoint, if they concentrated on fixing identified problems rather than arguing as to the validity of citations. This type of view was expressed by the utility during a recent effort to clarify in detail that certain construction items on the soils remedial work should not be subject to NRC's regulatory action.

3. The Midland project is one of the most complex and complicated ever undertaken within Region III. The reason is that they are building two units of the site simultaneously and additionally have an underpinning construction effort which in itself is probably the equivalent of building a third reactor site. The massive construction effort and the various stages of construction activity which are involved make the site extremely complicated to manage. This activity appears to cause a lot of pressure on the licensee management.

4. Mr. J. Cook, the Vice President responsible for the Midland site is an extremely capable and dynamic individual. However, these characteristics in conjunction with the complexity and immenseness of operation as set forth in 3, above, may actually be contributing to some of the confusion which seems to exist. The staff views that (1) he is too much involved in detail of plant operations and there are times when the working level staff appears to agree and be ready to take action where Mr. Cook may argue details as to the necessity for such action or may argue as to the specific meaning of detailed work procedures, (2) this kind of push may lead to such things as letters both signed and unsigned appearing in NRR and causing confusion, (3) this push may lead to some animosity at the licensee's staff level if NRC activities are looked on as slowing progress of construction at the site.

Recommendations

It appears essential that some action be taken by NRC to improve the regulatory performance of the Midland facility. The following specific suggestions are made.

1. The company must be made aware and have emphasized to them again that their focus should be on correcting identified problems in a complete and timely manner.

2. We should question whether or not it is possible to adequately manage a construction program which is as complex and diverse as that which currently exists at Midland. We would suggest specifically that the following activities be considered:

   a. That the licensee cut back work and dedicate their efforts to getting one of the units on line in conjunction with doing the soils remedial work.

   b. That they have a separate management group all the way to a possible new Vice President level, one of which would manage the construction of the reactor to get it operational and the second to look solely after the remedial soils and underpinning activities.

3. Consumers Power Company should develop a design and construction verification program by an independent contractor. This would provide an important additional measure of credibility to the design and construction adequacy of the Midland facility.

We would be happy to discuss this with you.

C. E. Norelius, Director
Division of Engineering and
Technical Programs

R. L. Spessard, Director
Division of Project and
Resident Programs

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

Attachment B
(K-2)

July 23, 1982

MEMORANDUM FOR: R. F. Warnick, Director, Enforcement and Investigations Staff

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

SUBJECT: INDICATORS OF QUESTIONABLE LICENSEE PERFORMANCE - MIDLAND SITE

As per our conversation of July 21, 1982, the following is a list of those items that various inspectors consider to be indicative of questionable licensee performance:

1. One of the leading items is the over-inspection performed on electrical QC inspectors which was done in response to NRC concerns identified in the May 1981 team inspection. The licensee found weaknesses in the inspections performed by some electrical QC inspectors pertaining to not identifying the mis-routing of cables. This item culminated in an item of noncompliance. The licensee did not expand the overview activity to a degree necessary for an acceptable resolution to the identified weakness - even after a meeting in RIII. This item has not been resolved to the satisfaction of the NRC although our position has been clearly defined.

   As a partial response to the team inspection concern, the licensee presented the NRC with an audit report which would demonstrate a response to our concern of questionable electrical QC inspections. However, the audit report stated that it (the audit report) did not address the NRC concerns.

2. During the dialogue for the underpinning and remedial soils work, a large amount of emphasis has been placed on the settling data for the structures involved. During a meeting in HQ on March 10, 1982, the need for QC requirements on remedial soils instrumentation were explicitly delineated. However, one week later, the NRC inspectors found soils work instrumentation installation was started the day after the March 10, 1982 meeting without a QC/QA umbrella; that the licensee's QA Auditor and QA Engineering personnel were not approached pertaining to the need for QA coverage for this soils settlement instrumentation; that there were strong indications that the licensee had mislead the NRC in relating that the work was essentially complete when indeed it was not; and presently, the licensee management informs our inspector that items are ready for his review when in actuality they are not. Our conversations with licensee personnel - other than management - confirm that the items are not ready for review.

NOS 11/4/82

8303090108

8pp

3. Historically, one of the NRC questions has been, "Who is running the job - Bechtel or Consumers?" The following example would allow one to believe it is Bechtel: As a part of the resolution to our findings in the soils settlement instrumentation installation, the NRC insisted that the licensee generate a Coordination/Installation Form to cover interface between different evolutions of instrumentation installation. The licensee would call our inspector for his concurrance on the adequacy of the form - the inspector would approve Consumers Power Company's form, but then would find out that Bechtel did not want to work to Consumer's form - the form that was generated to resolve regulatory concerns. This event has occurred twice and was considered as a deviation during a more recent inspection. The opinion of the staff is that if Consumers generates a form that will aid them in not incurring regulatory difficulty, and which has had NRC input, the licensee should demand that the contractor comply with these policies instead of the contractor dictating the regulatory environment under which they will work.

4. Deficiencies in material storage conditions has continually been a concern to the NRC and has resulted in items of noncompliance. To the inspectors, the ability to maintain quality storage is indicative of how rigorous or slipshod the constructor's attitude is towards construction. The licensee has attempted to entice the constructor to do better in maintaining the material storage conditions, but still the licensee's auditors and the NRC have negative findings in material storage conditions and negative discussions with the contractor about the validity of the finding.

5. At periodic intervals, the support of cables, particularly in the control room area, which are awaiting further routing or termination, has met with the disapproval of the NRC inspectors. These discrepancies also include cables without covered ends being on the floor in walk areas that are in a partially installed status. This is also another indicator of slipshod workmanship which has been brought to the constructor's attention at various times, but was last noted during a recent inspection.

6 In the area of instrumentation impulse line installation and marking, the licensee has had separability violations which has required removal of all installed impulse lines. Also, the NRC, because of this and significant adverse operational conditions, insisted that the installed impulse lines be identified. Although the licensee plans to mark the impulse lines, there was an inordinate amount of resistance to marking the lines - even though there had been instances of mis-matched channels because of identification confusion.

7. An example of reluctance in placing the responsibility for quality workmanship at the foreman and/or worker level has recently been identified. The NRC inspectors noted that some drop-in anchors were improperly installed and obviously did not adhere to the installation procedures. The licensee's attitude indicated this was not a valid finding because QC had not inspected the item. The NRC inspectors treat this as indicative that slipshod workmanship is tolerated in the hopes that QC will find the mistakes.

8. Late in 1981, the licensee decided to move the QA Site Superintendent into another position and cover this site function by sharing the site time between the QA Director and the QA Manager. After a January 1982 meeting with the NRC at RIII, the licensee opted to fill the QA Superintendent spot with another person. In the spring of the year, the NRC inspectors were following up on welding allegations and approached the QA Superintendent. The QA Superintendent was familiar with the alleged poor welding and had established what the NRC inspectors determined to be a responsive plan to resolve the questionable QC welding inspections. At the Exit Interview, the QA Director did not appear to back the QA Site Superintendent's proposed plan which had tacit NRC approval. The NRC inspector classified in writing and with just cause that the Exit Interview was the most hostile exit interview he had ever encountered.

9. During a recent inspection, it was noted by the NRC inspector that fill dirt was piled and being covered with a mud mat at a nominal 1:1¼ horizontal to vertical slope when the specification called for a 1½:1 horizontal to vertical slope. A constructor Field Engineer witnessed the wrong slope being installed and justified and defended the slope after being informed of the specification requirement. This is another example of the constructor having an attitude which precludes quality workmanship.

10. At different times, NRC inspectors have experienced difficulty in getting information which is controlled by the contractor, such as supporting calculations and qualifying information to justify a given installation. A recent example is: the NRC inspector informed the licensee and the contractor he wanted to see resumes of persons involved in the remedial soils work. There is an obligation to the NRC to supply a precise number of "qualified" persons on the soils work. The inspector was informed he could not get these records as they were personal. The inspector ultimately did get the information after bringing it to the attention of licensee upper management. However, this indicates an implied unwillingness of the constructor to share information with the NRC and sometimes with the licensee.

11. The licensee oftentimes does not demonstrate a "heads up" approach to their activities. The following are examples of the licensee operating in an environment using tunnel vision - "blinders".

a) During a recent NRC inspection, the inspector challenged the ability to maintain the proper mix ratio on high pressure grout. This was done after the inspector noted that the operator could never maintain the proper mix ratio without continual manual control - which was not available when the grout is applied. The licensee's apathetic attitude did not allow them to stop the grout application until the next day when this became an issue at the exit interview.

b) At one point in time, the company doing drilling on site for the remedial soils work cut into a safety related duct bank between the diesel generator building and the service water building. The Consumers Power Site Manager's Office (the production people) stopped work because - from a quality standpoint conditions were so deplorable. However, the Site Manager's Office did not have responsibility in this area - the Midland Project QA Department had this responsibility and did not invoke their authority to prevent the drilling work from getting out of control - or to bring it back into control.

c) The NRC inspector recently witnessed the licensee setting up to drill a well hole in safety related dirt using a technique which was not authorized. If the inspector had not brought this to the licensee's attention, the licensee would have violated an Order addressing remedial soils work and also the Construction Permit. When the licensee was queried as to the availability of the QC/QA personnel who would prevent such activity from happening, the NRC inspector was informed that this was (another) misunderstanding.

The NRC inspectors have been informed by our contacts on site that there are memos written to the effect that "peripheral vision" should be curtailed and communication with the NRC stifled. The NRC has not read these memos yet - but plans to in the near future, provided they really exist and infer what we have been informed.

12. The licensee seems to possess the unique ability to search all factions of the NRC until they have found one that is sympathetic to their point of view - irregardless of the impact on plant integrity. Some examples of this are:

a) The NRC soils inspector informs the licensee that soils stabilization grout comes under the Q program. The licensee is not particularly happy with this position. Unknown to the inspector, the licensee argues his point with NRR to have the grout non-Q - using only those arguments which support his (the licensee's) position. The licensee

has the advantage of the NRC inspector's technical and regulatory basis for supporting his (the inspector's) position, and therefore avoids mention of this during the discussions with NRR. However, the licensee's QA program, which has already been approved by NRR, states that all the remedial soils work is Q unless RIII approves a relaxation on a case by case basis. It appears the licensee does not wish to acknowledge the prior agreements with the NRC.

b) Since the failure of auxiliary feedwater headers in B&W steam generators, discussions have transpired between the NRC inspectors and the site personnel. These discussions have indicated that the licensee was maintaining a conservative approach and were entertaining the concerns expressed by the NRC which were stimulated primarily by gross mistakes in attempting the modification at operating B&W plants. The licensee's corporate personnel were annoyed that the NRC inspectors would not give approval to start the modification until all the preparatory work had been accomplished as this would tend to impact the schedule and the modification to the steam generators could become a scheduling nuisance. The licensee corporate personnel contacted the NRC inspectors involved to "reason with them". However, the corporate personnel, (including a representative from B&W) were unable to answer the concerns of the NRC inspectors but did mention that the NRR Operational Project Manager indicated that it was alright to proceed with the modification. The licensee corporate personnel could not state what the position of the NRR Construction Project Manager was on this issue - only that they had found some form of approval from someone in the NRC.

c) At times, when Immediate Action Letters or other forms of escalated enforcement become imminent, the licensee attempts to "appeal" their case with individuals in the regional management who are removed from the particulars of the tentative enforcement action. The licensee attempts to get these persons to agree to specific portions of the issue which would indicate that the licensee is "really not all that bad". However, the "real" issues, as identified by the NRC inspectors are being masked.

d) During inspections of the remedial soils work, the NRC inspector has been informed by the licensee that certain findings and areas of inspection were not within the purview of his (the inspector's) inspection program because they were in essence considered non-Q and that by virtue of prior agreement with the Regional Administrator were excluded from enforcement action. However, the NRC inspectors would subsequently find that there was no such agreement between the Regional Administrator and the licensee - only a philosophical discussion as to what, in general terms, constituted an item of noncompliance.

The above indicators support the reputation the licensee has for being argumentative. Their apparent inability to accept an NRC position without diligently searching to find a "softened" position results in numerous hours of frustrated conversations between all parties involved to resubstantiate (usually the original position) a position based on technical and regulatory prudency.

13. The licensee has been classified publicly by the NRC as being argumentative. The licensee continues to exhibit this trend, as evidenced by the following examples:

a) Essentially every item of noncompliance receives an argumentative answer which addresses only the specificity of the item of noncompliance and selectively avoids any concept which would support the essence for the item of noncompliance. For example - in the instance of the improperly installed drop-in anchor mentioned above, it was the fact that QC had not inspected the installation of the bolt which was important to the licensee. However, the real enforcement issue was that components were being improperly installed.

b) The Cycle II SALP made critical evaluations of the licensee's performance in several areas. The licensee's response to this SALP report was argumentative over specific details and did not seem to acknowledge that the consensus of opinion of the NRC inspection staff was that there were areas where the licensee's performance was weak. The licensee's argumentative position is in the form of "we really are not all that bad" when the records, findings and observations of the NRC inspectors support just the opposite position.

c) The "Q-ness" of the remedial soils work has continually been an argumentative topic of discussion which ultimately resulted in a HQ meeting on March 10, 1982. At this meeting, the "Q-ness" of the remedial soils work was specified and later documented with the meeting minutes. However, the licensee did not wish to abide by this position and a subsequent meeting was held in RIII to further clarify the NRC position. Still, the topic of "Q-ness" is being argued by the licensee, even though the ASLB has issued an Order further defining the "Q-ness" of the soils work. It might be noted that a hearing is in process over this soils issue and the NRC's position on "Q-ness" has been expressed during these testimonies.

14. During a recent episode, the licensee wanted to continue excavation of soils in proximity to the Feedwater Isolation Valve Pit (FIVP). However, the licensee wanted to perform this evolution without determining that the temporary supports of the FIVP were adequate. Making this determination would have an impact on scheduling, as stated by the licensee. The FIVP supports were installed without a Q urbrella and subsequent inspections did reveal several discrepancies in the installation of the support structure.

15. During the limited remedial soils work which has transpired, the licensee has managed to penetrate Q-electrical duct banks, a condenser header drain line, an abandoned sewer line, a non-Q electrical duct bank and a 72-inch circulating water line. All of these occurances have happened because of a lack of control and attention to details. Whenever approached by the NRC as to the adequacy of review prior to attempting to drill, the NRC receives responses which strongly suggest that the time was not taken to perform these reviews - perhaps taking this time would impact on the schedule.

16. By virtue of an earlier ALAB order, the licensee is required to perform trend analyses for nonconforming conditions. These trend analyses have, in the past, masked the data such that obvious trends are not obvious and has resulted in negative findings by the NRC. This was addressed in one of the earlier SALP meetings. Recently, while performing a review of hanger welding data, the NRC inspector found that the statistical data had been diluted to the point that the number of unsatisfactory hangers could not be determined from the trend analyses or the type and degree of nonconforming conditions which were being identified pertinent to the hanger fabrication.

17. The licensee continually would use the NRC staff as consultants and classifies a regulatory and enforcement position as counter productive. This is reflected by the licensee not wishing to perform Q-work without obtaining NRC prior approval and then addressing only those areas where the NRC has voiced a regulatory concern - provided it is convenient to the licensee. This attitude has particularly prevailed in the remedial soils issue and to a lesser degree in the electrical installation areas. The preferred NRC inspector mode would be for the licensee to generate his program to establish quality and then the NRC would approve or disapprove. However, the licensee requires consultation with the NRC to establish his level of quality requirements.

The above is not intended to be a complete list of all discrepancies which indicate questionable licensee performance as this would require a more extensive review of the records and inspection personnel involved than time permits. Also, there has been no attempt to systematically document the enforcement and unresolved items list as these are contained in other information sources. However, the listing is rather comprehensive of the types of situations and attitudes which prevail at the Midland Site as observed by the NRC inspector staff.

When considering the above listing of questionable licensee performance attributes, the most damning concept is the fact that the NRC inspection effort at Midland has been purely reactive in nature for approximately the last year, and that these indicators are what have been observed in approximately the last six months. If

these are the types of items that have become an NRC nuisance under a reactive inspection program, one can only wonder at what would be disclosed under a rigorous routine inspection and audit program.

Sincerely,

R. J. Cook

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

cc: W. D. Shafer
D. C. Boyd
R. N. Gardner
R. B. Landsman
B. L. Burgess

Enclosure 3

Attachment C.
(K-8)

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

August 18, 1982

MEMORANDUM FOR: Region III Files

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

SUBJECT: MEETING BETWEEN NRR AND REGION III RE CONSUMERS POWER COMPANY PERFORMANCE AT MIDLAND (DN 50-329; 50-330)

On July 26, 1982, R. F. Warnick and James G. Keppler met with E. G. Case, D. G. Eisenhut, R. H. Vollmer, R. O. Tedesco, T. H. Novak, W. D. Paton, and J. Rutberg to discuss the performance of Consumers Power Company at the Midland site.

During the meeting reference was made to information contained in two memos from the RIII staff. The first memo dated June 21, 1982 is from C. E. Norelius and R. L. Spessard and concerns suggested changes for the Midland Project. The second memo dated July 23, 1982 is from R. J. Cook and concerns the licensee's performance at Midland. Copies of the memos are attached.

The meeting resulted in the following recommendations:

(1) Region III should obtain the results of the recent audit by RMC.

(2) Schedule a public meeting between NRC and CPC management in Midland, Michigan, to obtain licensee commitment to accomplish (3) and (4) below.

(3) The licensee should obtain an independent design review. (A vertical slice from design thru completion of construction.)

(4) The licensee should obtain an independent third party to continuously monitor the site QA implementation and provide periodic reports to the NRC. Region III is to provide a suggested outline for the continuous monitoring function.

Robert F Warnick

Robert F. Warnick, Acting Director
Office of Special Cases

Attachments: As stated

cc w/attachments: Meeting
participants

POS 11/4/82
ZB

8303210295

Attachment D
(K-4)

August 18, 1982

MEMORANDUM FOR: James G. Keppler, Regional Administrator

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

SUBJECT: CONSUMERS POWER-MIDLAND (DN 50-329; 50-330)

When you created the Office of Special Cases and a special Midland Section staffed ith individuals assigned solely to that project, you indicated your concern with the Midland Project. You did this in spite of the favorable findings of the special team inspection conducted in May, 1981, and the favorable testimony you gave before the Atomic Safety and Licensing Board on July 13, 1981. You indicated your concern was based on the Systematic Assessment of Licensee Performance (SALP) report for the period July 1, 1980 to June 30, 1981, the inspection findings since those dates, and the memo of June 21, 1982, by C. E. Norelius and R. L. Spessard suggesting certain changes be made at the Midland Project (copy attached as Enclosure 1).

At my request R. J. Cook prep ed a summary of indicators of questionable license performance at Midland. A copy of Cook's memo dated July 23, 1982 is attached as Enclosure 2.

Because of your expressed concerns, you and I met with representatives from NRR on J ly 26, 1982 to discuss Midland and Consumers Power Company (CPCo) performance. That meeting also resulted in recommended actions. A summary of the meeting is attached as Enclosure 3.

Following the meeting with NRR, I discussed the recommendations of that meeting with our Senior Resident Inspector, other members of the new Midland Section, and former Section and Branch Chiefs who are intimately familiar with Midland.

Later that week (July 30) I spent a day at the Midland site. I attended the exit meeting following Landsman's and Gardner's inspection, met with CPCo and Bechtel management to get acquainted with them, and toured the plant site.

On July 31, 1982, I expressed my opposition to the recommendations we had come up with in the NRR meeting. My opposition was based on (1) opinions expressed by the Senior Resident Inspector, a Region III Branch Chief formerly responsible for the NRC inspection of Midland, and a Construction Section Chief who has been intimately associated with inspections of Midland regarding the proposed actions; (2) my visit to the site; and (3) the inability of Region III to articulate the problem(s) at Midland which the above referenced recommendations were supposed to solve. I indicated that we needed to better identify our concerns and the prescribe actions that would resolve these concerns.

OFFICE	RIII	RIII	RIII	RIII			
SURNAME	Shafer	Landsman	Shafer	Warnick			
DATE		RBK					

NRC FORM 318 (10-80) NRCM 0240 OFFICIAL RECORD COPY 0905 11/4/82

8304210301 2pp

On August 3, 1982, members of the Midland Section met with you to discuss my opposition to the recommendations coming from the meeting with NRR. The pros and cons of the recommendations together with other alternatives were discussed. The meeting concluded with you agreeing to give the Section until August 11 to determine a better proposed course of action to resolve NRC concerns about Midland.

To this end the Midland Section met together on August 4 and again on August 5 following our public meeting with CPCo on the SALP II report. Several alternatives were discussed including stopping all work on one unit, have an independent third party monitor all past and current construction work, stopping work in selected areas, performing a construction appraisal team inspection, placing all site QC work under CPCo, and establishing an augmented NRC inspection effort.

Although some members of the Midland Section thought that stronger actions should be taken, all members of the Section agreed they could support an augmented NRC inspection effort coupled with other actions to strengthen the licensee's QC/QA organization and management. These recommended actions are attached as Enclosure 4.

It is recommended the proposed actions to improve the licensee's performance be discussed with NRR and then the licensee.

Robert F. Warnick, Acting Director
Office of Special Cases

Attachments: As stated

OFFICE						
SURNAME						
DATE						

NRC FORM 318 (10-80) NRCM 0240

OFFICIAL RECORD COPY

[redacted]
ATTACHMENT #2

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

FEB 24 1983

Docket No. 50-329
Docket No. 50-330

Consumers Power Company
ATTN: Mr. James W. Cook
Vice President
Midland Project
1945 West Parnall Road
Jackson, MI 49201

Gentlemen:

We have reviewed your proposal to have the Stone and Webster Corporation (S&W) perform the third party independent assessment of the soils remedial work activities.

The staff has received sworn statements from the S&W Corporation and from the key S&W personnel (Attachments A and B respectively) attesting to corporate and individual independence.

The staff has also reviewed a letter, J. E. Brunner to W. D. Paton, dated November 15, 1982 (Attachment C) which describes the contracts undertaken by S&W for the Consumers Power Company and indicates that S&W or its subsidiaries have no holdings of Consumers Power Company stocks. The attachments to this letter have been subsequently notarized.

The staff has considered the qualifications of both the S&W organization and the individuals proposed as team members to conduct the independent review of Consumers Power Company's management of the Midland soil project. Inputs to this review included the information supplied in the above submittals, the staff's existing knowledge of S&W performance at other nuclear power plants and information as to S&W personnel competence.

Our evaluation of these documents revealed that the competence and independence criteria have been met as set forth in Chairman Palladino's letter to Congressmen Ottinger and Dingell of February 1, 1982.

Based on our reviews we have determined that the S&W Corporation is an acceptable organization to perform the third party assessment of the soils remedial work; however, the scope of the S&W assessment should be broadened to include the following:

3pp

8303216357

(1) Provide a QA overview and assessment of the design work packages to ensure accuracy and adequacy.

(2) Provide a QA overview and assessment of the QC inspector requalification and certification program.

(3) Provide a QA overview and assessment of the training conducted for all personnel in the soils remedial work effort.

(4) Expand the work contract to include an assessment of all underpinning work on safety-related structures on which underpinning work is done while your contract with Stone and Webster is in effect.

In addition, the Midland Section has reviewed Consumers Power Company's performance regarding the installation of Piers W12 and E12 and has concluded that no major discrepancies were identified during this work (Memorandum, R. Landsman to R. F. Warnick, dated 2/15/83, Attachment D).

Stone and Webster in their letter dated February 14, 1983 (Attachment E) also indicated that no major performance problems have been identified. They have stated that in their opinion additional underpinning work could be released for construction.

Based on the inclusion of the previously described contract changes, your performance record regarding Piers W12 and E12, and the acceptability of the Stone and Webster Corporation as the third party independent reviewer, we conclude that underpinning activities of safety-related structures may proceed. Please submit documentation of the expansion of the third party assessment to include the four areas identified above. The work activities will be authorized in accordance with the approved NRC/CPCo Work Authorization Procedure.

Should you have any questions regarding this letter please contact Mr. R. F. Warnick of my staff.

Sincerely,

Original signed by
A. Bert Davis

James G. Keppler
Regional Administrator

Enclosures: As stated

cc w/encl:
See attached distribution list

concurrence by telephone E Eisenhut

OFFICE	RIII						
SURNAME	Shafer/ls	Warnick	Lewis	Davis	Keppler	Eisenhut	
DATE	2/23/83	2/22	2/22	2/22	2/22/83	2/23/83	

cc w/encl:
DMB/Document Control Desk (RIDS)
Resident Inspector, RIII
The Honorable Charles Bechhoefer, ASLB
The Honorable Jerry Harbour, ASLB
The Honorable Frederick P. Cowan, ASLB
The Honorable Ralph S. Decker, ASLB
William Paton, ELD
Michael Miller
Ronald Callen, Michigan
Public Service Commission
Myron M. Cherry
Barbara Stamiris
Mary Sinclair
Wendell Marshall
Colonel Steve J. Gadler (P. E.)

ATTACHMENT D

#2

February 15, 1983

MEMORANDUM FOR: R. F. Warnick, Director, Office of Special Cases

THRU: W. D. Shafer, Chief, Midland Section

FROM: R. B. Landsman, Reactor Inspector, Midland Section

SUBJECT: LICENSEE PERFORMANCE ON PIERS 12E and 12W

RIII on December 9, 1982, authorized CPCo to initiate work activities pertaining to the drift, excavation and installation of Piers 12E and 12W. Subsequent to that authorization the licensee began work on December 13, 1982. Due to the Diesel Generator Building Inspection I have had only enough time to perform five inspections to determine the acceptability of the licensee's work in regards to these piers including removal of fill concrete, shaft excavation and bracing, bell excavation and bracing, and reinforcing details and proposed concreting activities.

I have identified three concerns since underpinning work began which have been subsequently corrected or are in the process of being corrected by the licensee. They are:

a) That the craftworkmen were not receiving the required amount of specialized remedial soils underpinning training. The licensee has agreed to expand the scope of craft training, but does not have the details worked out to date.

b) That the licensee wanted to use a super plasticizer as an additive to the concrete mix in lieu of good concreting practices, i.e., consolidation by vibration. The licensee after what I consider to be excessive discussions finally agreed to vibrate all underpinning concrete in accordance with good engineering practice.

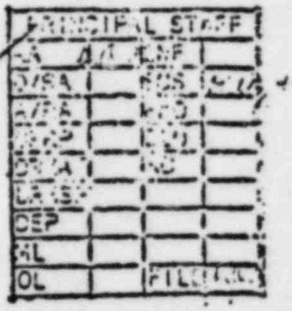
c) That the third party independent assessment team is not reviewing the design documents for technical adequacy. They are only doing implementation review to assure that the design documents are being followed. From discussions with Stone and Webstar personnel, it was determined that this important parameter was not included in their contract. The licensee is presently considering including this in the contract documents.

Besides these three concerns no other issues or deviations from regulatory requirements have been identified.

8303210312 1p

OFFICE	RIII			R. B. Landsman Reactor Inspector			
SURNAME	Landsman:ls	Shafer					

ATTACHMENT E



STONE & WEBSTER MICHIGAN, INC.

P.O. BOX 2325, BOSTON, MASSACHUSETTS 02107

Mr. J. G. Keppler
Administrator, Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

February 14, 1983
J.O. NO. 14358
MPS-8

RE: DOCKET NO. 50-329/330
MIDLAND PLANT - UNITS 1 AND 2
INDEPENDENT ASSESSMENT OF AUXILIARY BUILDING UNDERPINNING
ASSESSMENT OF WORK ON PIERS W12 AND E12

As of February 11, 1983 the Stone & Webster - Parsons Brinckerhoff Assessment Team has observed the excavation, placing of reinforcement, and concreting of underpinning pier W12, and the excavation, and placing of reinforcement for underpinning pier E12. In addition, the Assessment Team has reviewed the drawings, procedures and other documents pertaining to the underpinning work and has observed the performance of the Quality Assurance and Quality Control Organizations during the progress of the work.

During the period that the Assessment Team has been on site, daily meetings have been held with Construction, Quality and Engineering personnel to obtain additional information and discuss observations.

The Assessment Team has issued twenty Weekly Reports to the U.S. Nuclear Regulatory Commission. These reports have described the activities of the Assessment Team and summarized their observations and findings.

The Assessment Team has issued a total of five Nonconformance Identification Reports. Four of these Nonconformance Identification Reports have been closed out to the satisfaction of the Assessment Team. The remaining open Nonconformance Identification Report was issued on February 10, 1983 and the Assessment Team feels that it can be closed out in the near future without impacting the progress of the underpinning.

The underpinning work is being performed in accordance with the construction and quality procedures. As the work has progressed, the procedures have been modified based upon experience gained during the construction of piers W12 and E12. The Assessment Team feels that these minor changes are appropriate and will have a positive effect on the quality of the underpinning work.

288

8302230157

FEB 15 1983

JGK

Based upon these observations and findings, the Assessment Team is of the opinion that additional piers could be released for construction. This will benefit the quality of the work by allowing the Contractor to maintain the experienced labor teams from piers W12 and E12.

If you have any questions, please contact me at (617) 589-2067.

A.S. Lucks
Project Manager

Attachment #10

Federal inspector testifies: Attention to detail lacking

4-21-83

By JAMES ISELER
Daily News staff writer

Problems at the Midland nuclear plant stem from a "lack of attention to detail" by Consumers Power Co. officials and workers on the site, a U.S. Nuclear Regulatory Agency inspector told a federal panel Thursday.

The inspector, Ross Landsman, discussed several problems with work to shore up buildings that cracked after settling excessively because they were constructed on poorly-compacted soils.

"It just seems to be the attitude on site," Landsman said. "No one's harping on people to do the job right the first time."

Landsman was one of four NRC inspectors testifying before the federal Atomic Safety Licensing Board on quality assurance (QA), a series of checks and inspections to insure the plant is built safely.

The hearings will continue today and next week at the Quality Inn, 1815 South Saginaw. They are open to the public.

THE WITNESSES were questioned all day by Lynne Bernabei, a Washington, D.C., attorney representing citizen intervenor Barbara Stamiris. Ms. Bernabei said she plans to show Consumers lacks the "character and competence" to build and operate the plant safely.

Consumers will defend its programs when utility officials testify at the hearings next week. The NRC also will present its current position on the adequacy of the programs.

'I don't trust 'em,' Nuclear Regulatory Commission inspector Ross Landsman said of Consumers Power Co. 'There's too many examples of them putting the cost and schedule ahead of quality.'

Landsman said the problems were discovered in the early stages of the remedial soil work, called "underpinning," and did not require a stop work order.

"Had they been pouring concrete, I would have stopped the work," Landsman said.

Following an ASLB order last year, NRC staff members must approve each stage of repair work before construction can begin. Without the provision for prior approval, Landsman said, work at the site should not continue.

"I don't trust 'em," he said. "There's too many examples of them putting the cost and schedule ahead of quality."

As an example, Ms. Bernabei mentioned an April 24, 1982, incident in which workers drilled through a safety-related duct bank during excavation work.

Although Consumers officials stated earlier that the drill "nicked" the duct bank, Landsman called that a "gross misrepresentation."

"As opposed to only nicking it, he (the worker) drilled through it 13 more times," Landsman said.

HE ALSO SAID it is "like pulling teeth" to get necessary documents from the utility, a situation which inhibits the effectiveness of inspections.

"We might have half-a-dozen items going on at once and the reason is because we can't get documents," Landsman said, adding the utility often has trouble obtaining the information from Bechtel Power Corp., its chief contractor.

"Does this indicate to you Consumers doesn't have adequate control over its contractor?" Ms. Bernabei asked.

"Yes," Landsman replied.

"We considered it a minor form of harassment," said Wayne D. Shafer, former chief of the Midland section of the NRC's Office of Special Cases.

Ms. Bernabei said later the Landsman testimony supports her argument about Consumers' character.

"They can't control their contractor so how in the hell can they run a nuclear plant?" she asked.

IN OTHER TESTIMONY Thursday:

- Landsman testified he still is concerned with the lack of previous quality assurance experience by QA supervisors on the site. He said only one of four supervisors has any QA experience.

Consumers has changed QA supervisors various times, moves which Landsman said came about because of NRC concern. However, even though unqualified inspectors were replaced, the replacements also are not qualified, Landsman said.

"Every time we raised a concern about a certain individual, they'd move him around," Landsman said. "Certain individuals, I don't feel are qualified to do their job."

- Shafer said a "handful" of quality control (QC) inspectors were certified when the ASLB gave the go-ahead for the underpinning work in December. There were enough to begin the project, he said.

Other inspectors were certified after being trained while the work proceeded. Shafer said the soil underpinning is unique and that inspectors needed experience with the project before they could be certified.

- The NRC notified the hearing board of a problem with a row of piers being built underneath the auxiliary and turbine buildings. The piers are part of the underpinning work designed to prevent the buildings from sinking further.

The problem occurred during a test load to check distribution of weight on one of the piers, NRC attorney William Paton said.

"The load isn't going where they wanted it to go," Paton said. "The problem is very recent and no one's really sure what's going on."

Landsman

Midland-Ruke

Midland Daily News

May 5, 1983

QC procedure was 'abused' at n-plant, inspectors say

By JAMES ISELER 5-5-83
Daily News staff writer

Problems at the Midland nuclear plant went undetected because procedures designed to catch poor workmanship during the last two years were "abused," federal nuclear inspectors said Wednesday.

However, Consumers Power Co. has discontinued the procedure, known as "in-process inspection notices" (IPINs), and will reinspect all work reported under the procedure, the inspectors said.

The testimony came from four U.S. Nuclear Regulatory Commission inspectors during a hearing before the Atomic Safety and Licensing Board.

NRC SENIOR resident inspector Ronald J. Cook said that the procedure itself was adequate for reporting building deficiencies, but that some Bechtel Power Corp. quality control inspectors misused the IPIN system.

Another inspector, Dr. Ross Landsman, said the IPIN abuses indicate quality control managers "did not have a firm grasp on what they were doing."

Attorney Lynne Bernabei, representing citizen intervenor Barbara Stamiris, said Landsman's statement supports her claim that Consumers lacks the competence to build the plant.

Consumers will defend the procedures when its witnesses testify later in the hearings. The hearings are scheduled to continue through Friday and resume in June. They start at 9 a.m. at the Quality Inn, 1815 South Saginaw, and are open to the public.

THE PROBLEM arose because some quality control (QC) inspectors used IPINs as final reports of construction problems rather than for their proper purpose, as a preliminary inspection, the witnesses said.

Under the IPIN procedure, once the number of problems reached a certain level, inspectors stopped documenting them, Cook said.

"As a result, measures were not established to prevent the continued installation and use of these nonconforming items," according to an NRC violation statement issued against Consumers.

Supposedly, the work was to be redone and reinspected, a procedure known as the "return option." But some work was never sent back to the construction stage, the violation statement said.

Consumers "should have realized they were creating the potential for misuse of the IPIN" by allowing the return option, NRC inspector Ronald N. Gardner said.

"Had they used the IPIN procedure properly, that is, document all the deficiencies on the IPIN, there wouldn't have been a problem," Landsman added.

Once the NRC issued a violation for the IPIN abuses in February, Consumers discontinued using IPIN, Landsman said. The procedure had been used since June 1, 1981.

"They promised to reinspect anything they ever wrote an IPIN on," Landsman said.

IN OTHER ACTION at the hearings, NRC attorney William D. Paton told the ASLB that the agency approved TERA Corp. to perform an independent review of the plant's auxiliary feedwater system. The firm has offices in Washington, D.C., and San Francisco.

Darl S. Hood, of the NRC's Nuclear Reactor Regulation office, called the review a "cradle to grave" procedure that will study everything from the system's design to its installation and testing.

TERA also has asked to perform proposed reviews of the diesal generator power system and the portion of the heating, ventilating and air conditioning system which would keep the plant's control room habitable during a radioactivity release.

Hood said the NRC has not yet approved the firm for the last two areas but added he didn't "anticipate any problems finding them acceptable."

The audits are to be performed independently of the NRC's inspection process.

Midland Nuke

Gardner, Cook, Landsman,

Midland Daily News

Wednesday, May 4, 1983, Midland, Michigan

Next six months may be do-or-die for nuclear plant

By PAUL RAU
Daily News staff writer

Halting construction work at the Midland nuclear plant will be considered if the latest programs to improve the plant's quality aren't effective, a nuclear regulator testified Tuesday in Midland.

James G. Keppler, Region III administrator for the U.S. Nuclear Regulatory Commission, said his agency already is doing an unprecedented amount of "hand-holding" with Consumers Power Co., and that he will consider shutting down the project if the situation worsens.

Keppler said the utility's performance over the next six months will be the critical test. That should be enough time to judge whether Consumers Power's new construction completion plan and associated third-party reviews of the plant's quality will assure proper construction, he said.

Keppler told the Atomic Safety and Licensing Board (ASLB), which has been conducting Midland plant licensing hearings this week, that the NRC has abandoned "true regulatory posture" and has become too involved with overseeing construction at the Midland plant.

"WE'RE GETTING VERY close to almost doing it ourself," he said of building the plant. "I really feel that the NRC, as a regulator, should not be in that role."

Keppler said the NRC adopted the role due to continuing breakdowns of quality assurance (QA) programs at the Midland plant. He was asked by ASLB Chairman Charles Bechhoefer if the NRC should take even more control of the project, such as requiring Consumers and Bechtel Power Corp. to get the NRC's written approval for each step of the construction work.

"I'll probably recommend that the job be stopped if we have to go that far. I really want to get out of that role as soon as I can, as soon as I have confidence that QA will be implemented properly," Keppler testified.

Keppler believes that the new program — involving more NRC scrutiny and a series of inspections and outside audits of the plant's quality and design — should turn the project around and make a future work halt unnecessary. Most work on the plant's safety-related systems is now voluntarily halted by Consumers Power to permit reinspection.

"It's my view that that effort should be sufficient to provide the kind of assurance this board needs, the NRC needs and the public needs that the plant will be built properly. If that program doesn't work, I don't know what will unless we build it ourselves," Keppler said.

IN OTHER TESTIMONY, Keppler told citizen intervenor Mary Sinclair that the public will not have a vote in the choice of outside firms to conduct the independent, third-party audits of the plant's quality and design.

"I don't believe in the shared process of decision-making, and I intend to resist that as long as I have this job," he said.

In a related area, Keppler said that a letter from the Government Accountability Project (GAP) protesting the hiring of Stone & Webster, an engineering company, to oversee soils work at the Midland plant is a "diatribe" that ignores good work by the firm.

Mrs. Sinclair had been arguing, based on GAP's research into S&W, that the firm shouldn't have been hired at Midland because it had exhibited poor QA and caused "huge cost overruns" at the Shoreham and Nine Mile Point nuclear plants.

"There isn't an engineering organization in this country I couldn't write a similar diatribe about," Keppler told her. "Organizations are not pure. They do some jobs well, and some jobs they don't do well. Look at Bechtel — their work at Midland is not as good as at other facilities."

MICHAEL MILLER, an attorney representing Consumers Power, also cross-examined Keppler on positive aspects of work at the Midland plant. Keppler agreed that the quality audits by the outside firms will be more thorough than the NRC can perform.

Keppler also agreed that eight recent events tend to assure him QA is improving, although GAP attorney Lynne Bernabei diluted that testimony somewhat by pointing out that some of the improvements were done at the NRC's initiative and not Consumers'.

But Miller said he'd made his point. "There's a lot going on at Midland now that is positive and not negative as far as the NRC is concerned," he said.

NRC's Keppler: I'm as tough as you'll find

A government official who oversees work at the Midland nuclear plant and many others says he's a tough regulator.

James G. Keppler, administrator of the U.S. Nuclear Regulatory Commission's Region III office, made the comment Tuesday during the licensing hearing for the Midland plant.

Keppler apparently was perturbed by a line of questioning pursued by intervenor Mary Sinclair, and defended his actions regarding the Midland plant.

"I've been as tough on regulation as any regional administrator in the country," said Keppler, noting he's issued more fines and and taken more enforcement actions than other NRC officials in comparable positions.

He said firms which build nuclear plants "think I'm way out in left field in terms of regulating the industry. Believe me, we're regulating tough in Region III."

Keppler said he and Mrs. Sinclair disagree only on how to handle problems at the Midland plant, not that there are problems. "If you don't respect my judgment on it, I'm sorry," he told her.

- Attachment #11

edy. Page B-5
age B-10

THURSDAY, APRIL 28, 1983 The Saginaw NEWS METRO

GAP: Inspectors wanted nuclear plant shut down

BY DAVE SEDGWICK
News Staff Writer

MIDLAND — An activist "whistle-blower's" group hopes to prove that construction flaws at the Midland Nuclear Plant are more severe than the Nuclear Regulatory Commission so far has admitted.

A spokeswoman for the Government Accountability Project said the group hopes to prove that top NRC officials played down the worrise of on-site inspectors about Consumers Power Co.'s quality control program.

The Atomic Safety and Licensing Board now is reviewing the quality control issue, the latest stage of Consumers Power bid for an operating license.

After Wednesday's ASLB hearing, GAP spokeswoman Billie Garde said she has requested the documents under the Freedom of Information Act. The NRC has turned over some papers to GAP and withheld others.

Ms. Garde contends that the breakdown in quality control is worse than the NRC has publicly admitted. As proof, she released the contents of an NRC log which indicates that NRC inspectors wanted to recommend a halt to construction last fall.

The NRC document was a daily progress report on an intensive NRC inspection of the diesel generator building. The structure is supposed to supply emergency power to the plant in case of blackout.

Wayne Shafer, chief of the Midland Section for the NRC's Office of Special Cases, kept the daily log of the NRC probe.

The log showed the following entry for Nov. 10, . . . "The team is uptight — wants to recommend shutdown — will probably go for (civil penalties.)"

Shafer confirmed the authenticity of the document. But he noted that the log only indicated the inspectors' feelings at that time, and was not a formal recommendation.

"It was an ongoing investigation, and we were upset because we had found a lot of problems," Shafer said.

The agency's regional headquarters in Illinois would have had to approve any shutdown order, he noted.

The NRC's Midland team never made a formal recommendation to headquarters on a shutdown, Shafer said. Consumers Power forestalled any possibility of an NRC-ordered shutdown when the utility halted most construction work last December.

The agency later fined Consumers Power $120,000 for the construction flaws. According to Garde, some agency inspectors wanted to take tougher steps against Consumers Power.

NRC officials today bluntly denied that the log entry showed any disagreement within NRC ranks.

"I don't think there is any dissension," said Bob Warnick, director of the NRC's office of special cases. "Everybody is not identical in their thinking but I don't think it's a big deal."

Warnick said the NRC inspectors agreed that a shutdown might have been necessary but that Consumers Power took the initiative.

"We were thinking along the same lines," Warnick said.

Despite NRC denials, Ms. Garde stuck to her contention that the NRC is divided.

"I think there is significant dissension, and the log entry is one indication of that," she said.

The hearings are certain to heat up next Monday, when James G. Keppler, the NRC's regional administrator, comes to Midland to testify on Consumers Power's quality control problems.

In his written testimony, Keppler has indicated that the utility can no longer be trusted to build the plant properly — that an independent auditor must review construction.

Clare man faces murder trial

Midland Daily News

May 4, 1983

N-plant design lacked 'common sense'

By LORIE SHANE 5-7-83
Daily News staff writer

The original design for part of the Midland nuclear plant lacked "common sense," an NRC inspector said Friday, and didn't adequately protect public health and safety.

Though it did meet NRC requirements, Dr. Ross Landsman said the original design for the plant's auxiliary building, including its attached control tower and electrical penetration areas, was deficient.

Landsman was testifying during a federal hearing on the nuclear plant. The hearing is to determine whether work to fix soil problems at the plant is adequate and whether Consumers Power Co. should get an operating license.

Friday's session covered various topics, including Consumers' attitude and actions regarding quality assurance, as well as the NRC's own inspection procedures.

THE AUXILIARY BUILDING sits between the two nuclear reactors. The control tower and electrical penetration areas are structurally attached to it.

The original design called for the auxiliary building to rest on very stiff natural clay, while the control tower and electrical penetration areas would rest on "controlled," compacted fill soils.

Problems surfaced after those buildings were constructed, when Consumers Power Co. discovered the fill soils were not compacted adequately. Consequently, the part of the building which rested on fill soils settled more than the part resting on hard clay, which put stress on the building.

The utility now is underpinning parts of the auxiliary building with concrete piers to make sure it is adequately supported.

Landsman said that even if the original design had been followed properly — and the fill soil compacted adequately — he still does not believe the facility could have been operated "with due regard for public health and safety."

He said the original design calling for the structure to rest on two types of soil — hard clay and compacted fill — did not make engineering sense because the part resting on fill would not get adequate support.

LANDSMAN SAID under cross-examination by Consumers Power Co. attorney Michael Miller that the design did meet NRC requirements, though he added that "if it's not a design deficiency (in the regulatory sense), it should be."

He also said that the NRC itself was aware of the auxiliary building design in 1969 and approved it as part of the utility's overall preliminary design before it granted Consumers a permit to begin construction.

NRC project manager Darl Hood said after the session, however, it is "misleading to say we approved the auxiliary building" design in 1969. He said the NRC does not do an in-depth review of each aspect of the preliminary design, but looks at the "design concept."

IN OTHER AREAS of testimony, the NRC's Wayne D. Shafer said there has never been a nuclear plant in Region III that was completely free of nonconformances.

Shafer has said in past testimony that quality should be "built in," not "inspected in" at nuclear plants.

Under cross examination, he agreed if it were possible to build in quality with 100 percent success, then there "would be no need for the NRC."

But, Shafer added, that doesn't happen in the "real world."

Miller provided a chart showing the number of items of noncompliance found at all Region III plants since 1980. There were 61 such items at the Midland plant, while the average of all 10 plants was 50.3 items. The number at other plants ranged from 19 to 102 items.

The largest number was found at the LaSalle County Nuclear Station in Illinois, but Shafer said that can be attributed to the fact that the NRC steps up its inspection effort when plants near completion.

MILLER ASKED SHAFER about several memorandums or letters which indicated Consumers was planning to revise inspection procedures which the NRC has said allowed problems to go undetected.

Shafer has criticized Consumers for being "untimely" in dealing with the IPIN system. That stands for "in-process inspection notices," which quality inspectors use to record construction problems. The NRC has said some inspectors did not report all the problems they found and not all the work problems found were corrected.

The NRC told Consumers about its concern with the IPIN system last fall, Shafer said, but Consumers didn't realize it was "such a big problem" until January.

Miller showed correspondence between Consumers officials, however, which indicated they were making plans last fall to revise the IPIN system.

Midland Mich

Shafer Landsman

Attachment #12

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

APR 0 5 1983

Government Accountability Project
Institute for Policy Studies
ATTN: Ms. Billie P. Garde
Director
Citizens Clinic for Accountable Government
01 Que Street, N. W.
Washington, D. C. 20009

Dear Ms. Garde:

Your letter of March 7, 1983, commenting on issues presented at the February 8, 1983, public meeting and regarding Consumers Power Company's (CPCo) Construction Completion Program (CCP) for Midland Units 1 and 2 described in a January 10, 1983 letter from CPCo, is being answered in part by Mr. Eisenhut. He has requested Region III to respond to those portions of your letter addressing matters which are the responsibility of Region III.

You expressed concern that the responsibility for the on-site inspectors and the Midland Section has been transferred to the Regional Administration and Washington-based NRC officials. Let me assure you that the responsibility for the Midland resident inspectors and the Midland Section inspectors has not changed. They still report to me through first and second line supervision. Likewise, the Regional NRC inspection responsibility for the Midland plant has not changed since it was assigned to the Office of Special Cases in July 1982.

In your comments you expressed concern that there have been a number of incidents within the last several months where Regional personnel have indicated one answer pertaining to construction work, and then other action was taken after approval from NRR. We disagree with your characterization of the facts. Our position on each of your three examples is as follows:

1. While it is true that Ross Landsman was not included in the conference call of February 8, 1983 regarding pier load test sequencing, his input was subsequently provided to both CPCo and NRR. At that time he agreed with the conclusions and decisions reached during the previous February 8 phone call.

2. Region III (RIII) personnel gave approval for doing the Feedwater Isolation Valve Pit (FIVP) jacking and they were aware of the licensee's schedule when they gave their approval. The RIII personnel who were at the ASLB hearing (the same ones who gave the approval) do not remember making the statement you attributed to them; however,

8304110541

they have stated that any references made by them concerning FIVP work activities commencing in March or April pertained to the actual drifting under the FIVP to pier 9 and not to the FIVP jacking work. The drifting actually commenced on February 28, 1983.

3. The NRC staff believes that "no major discrepancies" have been found in the actual underpinning work. In reference to the cracks identified during FIVP jacking operations, the licensee submitted a report to the NRC which concludes that the cracks were not indicative of any structural damage having occurred to the FIVP. The NRC is currently reviewing this report and no discrepancies have been identified thus far. In reference to the February 15, 1983 memorandum from Ross Landsman to R. F. Warnick, the three issues identified in the memo were not considered to be major discrepancies. The three issues have been satisfactorily addressed by the licensee.

With respect to another of your concerns, RIII personnel who were involved in the initial contacts with the Stone and Webster (S&W) organization do not believe that anything they said or did prior to February 24, 1983, the date S&W was approved, could have given the impression that S&W's onsite activities had been approved by the NRC.

You also expressed concern about the "as-built" condition of the plant and who will identify the problems at the plant. In this regard, RIII expects the licensee's drawings and documents to reflect the plant as-built condition. The special inspection of the diesel generator building performed by the Midland Section identified differences between drawings and actual construction. We expect the licensee to identify existing differences and other problems at the plant. In the CCP the licensee has committed to do this. The NRC is requiring CPCo to expand the CCP overview to include the licensee's identification of problems. After the licensee has completed their problem identification process, the Office of Special Cases plans to conduct additional inspections to determine whether the licensee's inspection effort has been acceptable. The NRC has also required that a third party conduct an independent construction verification program after the CCP has identified the problems. This should provide a second means of determining the acceptability of the licensee's inspection effort.

Regarding matters which you identified as generic problems, such as QA/QC documentation, training and recertification of HVAC welders, unidentifiable electrical cables, untrained QC inspectors, and material traceability inaccuracies, the RIII inspectors have or will address each one. Our practice,

when the NRC identifies a generic problem, is to require the licensee to determine whether or not that generic problem exists in other areas of their plant and if it does, what actions they have taken or will take to address the generic concerns. Our inspectors review the licensee's response and assess the acceptability of it. The following specific actions have or will be taken to address each of the above listed concerns.

1. The RIII staff is currently reviewing the HVAC welder qualification issue. We will begin our review of other HVAC (Zack) issues in the near future.

2. The NRC required the licensee to reinspect electrical cables to make sure the correct cables are installed. As of March 24, 1983, seven cables were found by the licensee to be other than that specified by design requirements out of 8,148 cables inspected.

3. QC inspector training has been reviewed and the licensee has been required to improve QC inspector training.

4. We have required the licensee to address the material traceability problems identified to date.

We are not aware that what is and what is not "Q" soils remedial work is a subject of controversy. As of March 10, 1982, all remedial soils work was determined by all parties to be "Q". This determination was further clarified by the May 7, 1982 ASLB order which adopted use of drawing C-45. This drawing clearly identifies "Q" remedial soils boundaries.

The following information is presented in response to your questions regarding the approval and work of Stone and Webster in their soils overview.

1. We judged the adequacy of the initial S&W work by whether or not our inspectors found problems with the licensee's work that we would have expected the overviewer to find. We also based our judgement on the adequacy of their reports.

2. We have not reviewed S&W methodologies and do not plan to unless we find significant problems which they have missed.

3. We have not reviewed the revised contract regarding the assessment of underpinning work on safety-related structures.

Regarding the procedure to be used to approve the independent third party to overview the CCP, the Region will follow basically the same procedure as we used in approving Stone and Webster for the soils overview. A

meeting was held in Midland on February 8, 1983 to discuss the CCP and to hear comments from members of the public. Selection of the overviewer will be proposed by the licensee and that selection will be submitted to the NRC for approval. We do not plan to hold a public meeting to hear comments on the independent third party proposed by the licensee to perform the CCP overview; however, we will consider all written comments received before our decision.

If you have any questions regarding this response, please contact Mr. Robert Warnick (312/932-2575).

Sincerely,

A Bert Davis

for James G. Keppler
Regional Administrator

cc: DMB/Document Control Desk (RIDS)
Resident Inspector, RIII
The Honorable Charles Bechhoefer, ASLB
The Honorable Jerry Harbour, ASLB
The Honorable Frederick P. Cowan, ASLB
The Honorable Ralph S. Decker, ASLB
William Paton, ELD
Michael Miller
Ronald Callen, Michigan
Public Service Commission
Myron M. Cherry
Barbara Stamiris
Mary Sinclair
Wendell Marshall
Colonel Steve J. Gadler (P.E.)

Midland Daily News, Midland, Michigan

Issue at nuclear hearing: What does 'well under way' mean?

By LORIE SHANE
Daily News staff writer

Whether the U.S. Nuclear Regulatory Commission was misled about work at the Midland nuclear plant became a question of semantics Thursday, as NRC inspectors explained how they interpreted statements made by a Bechtel Power Corp. official.

The inspectors testified during a federal hearing on plant licensing.

The issue centers around a March 10, 1982, meeting and a March 12, 1982, telephone call between NRC, Consumers Power Co. and Bechtel officials.

The meeting and telephone call were to discuss how much of the ongoing soils work at the plant should have to meet quality assurance requirements.

Two NRC inspectors — Dr. Ross Landsman and Ronald Cook — have said they were led to believe during the meeting and phone call that work to install monitoring instruments as part of the soils work was nearly complete.

Based on that, the NRC did not require Consumers Power Co. to go back and make the finished work meet quality assurance requirements, though it agreed the utility should show the work at least was acceptable, the inspectors said.

During a later, on-site visit, however, the inspectors learned the work was only in the early stages.

The inspectors did not say they were deliberately misled to believe the work was complete, but that if they had known on March 10 that the work was only in the early stages they would have required the company to meet quality assurance regulations.

LANDSMAN AND COOK have testified that Bechtel Power Co. official Alan J. Boos made statements at the March 10 meeting which led them to believe the instrumentation was nearly complete, though they don't remember the exact statements.

Others at the meeting, including NRC, Consumers and Bechtel officials, have said that they either do not remember Boos' statements or that Boos mentioned the instrumentation, but did not give a status report on its completion, according to Charles H. Weil, the NRC official who investigated the incident.

Some people said they took Boos to mean the work had begun, but was not finished, according to Weil's report.

Boos himself told the investigator that he was trying to say that the work was under way, but not complete, according to the report.

REGARDING THE MARCH 12 telephone call, a written transcript shows that Boos said the instrumentation was "essentially well under way."

"Does the word 'essentially' mean 'almost,' or 'nearly'?" Consumers attorney Michael Miller asked Landsman.

"Yes," Landsman responded.

"Okay, do the words 'well under way' mean the same thing as 'complete'?" Miller asked.

"Yes," Landsman replied again.

Cook also said he took the phrase "essentially well under way" to mean nearly complete, although he agreed that in the nautical sense the term "under way" refers to the beginning, not the completion, of a ship's voyage. Cook is in the U.S. Navy Reserve.

Miller also asked about the wording of Landsman's written statement to Weil, in which Landsman said it was agreed at the March 10 meeting that work which had begun before that date would not be required to have a quality assurance plan.

Since the work on the instrumentation had begun prior to March 10, Miller asked why the NRC cared how much of it was complete.

Landsman replied that "in the context I used the word 'begun,' it's also meant to mean 'begun and essentially complete'."

"I see, so 'begun' means complete, too, or essentially complete," Miller said.

Landsman did not immediately respond, but later said Miller was "twisting my words around out of context."

WEIL DOES NOT draw any conclusions in his report, but said his personal opinion is that if you use the term "lying" to mean any misstatement of fact, then "most definitely he (Boos) lied."

If the term "lying" means making misstatements deliberately, then in this case "the facts don't bear it out," Weil said.

Miller took issue with the cover letter to Weil's report, which states that the NRC staff was misled by Consumers Power Co. and Bechtel employees.

He pointed out during questioning that the only statements made were by Boos — a Bechtel employee — and that nobody recalled misleading statements made by Consumers Power Co. officials.

In that sense, the cover letter itself is misleading, Weil agreed, though he said the NRC tends to view Consumers and Bechtel, as well as all the subcontractors at the site, as "one and the same."

Weil did not write the cover letter; it was written by NRC Region III administrator James G. Keppler.

Landsman said he thought the reference to Consumers related to a separate incident.

Attachment #14

Handwritten notes pertaining to the GAP discovery request on Midland for B. Stamiris.

Item 5. Documents relating to independent audits at Midland.

1. 2-24-83 Notes on telecon with B. Garde. Follow-up on Midland meeting.
2. 4-18-83 Notes from meeting with TERA on IDCVP
3. Undated notes on TERA IDVP
4. Undated notes on TERA IDVP
5. Undated notes on ACRS requested report on design quality and construction adequacy.

Item 7. Documents relating to the March 1982 SALP

6. Undated notes on Midland Salp meeting with Licnesee and Region III
7. 4-26-82 Notes on Midland SALP Licensee Meeting.

8. Record book with notes on telecons and meetings from 5-12-82 to present. Not complete.

(1)

Telecon w/ Billie Garde 2/24/83

Follow-up on Midland meeting -

GAP wants to provide a more technical analysis of CPCo's proposal -

Some kind of form to present analysis
Wants to meet w/ NRC.

in next week or couple of days →

Reg. III + NRR people in Wash., D.C.

? Major detail being worked between Cook + Eisenhut on S+W + CCP

* GAP would prefer a meeting or would present analysis in letter.

GAP analysis of CCP

• ACRS - Late March

-2258

MEMORANDUM OF CALL

Previous editions usable

TO: E. Eisenhut

☑ YOU WERE CALLED BY- ☐ YOU WERE VISITED BY-

Billie Garde

OF (Organization) Cont. Accountability P.

☑ PLEASE PHONE ☐ FTS ☐ AUTOVC

933-2727

☐ WILL CALL AGAIN ☐ IS WAITING TO SEE YC

☐ RETURNED YOUR CALL ☐ WISHES AN APPOINTM

(2)

... [illegible] -

4/13/83 -

- Orgm. plans for HUAC / Standby [illegible]
by early May -
Do we approve the Orgm. plan? ◁

Protocol approval -

ID reviewer approval -

QA plan on [illegible] -

(3)

Relative to TERA IDUP -

Division of responsibility between Reg. III + NRR. re implementation of the plan.

OCR report in mid status reports CO/NRR
Leave w/ Region lead. findings; finding resolution.

- No CPCo audits of TERA.
- Warnick may not come.

(I)

Midland —
Rate-to:

TERA IDCUP - plan for review
All inputs are in → Request for info
Address @ a meeting -

TERA independence + qual. → Rec'd 3/18.
Requested more info. 3/30
TR input to DL
[Sullivan / Mercier] 4/8/83

Ltr to CPCo.

Mtg. 4/13/83

- To discuss staff review of IDCUP plan
  - TR question
  - CP question / comment
  - Level of reptg. - comm
- To listen to TERA proposal to expand IDCUP plan to other systems
- To get NRC initial reactions to proposed expansion.

Attendees: TReviewers - Gilray, Sullivan, LeFave, Reg. III rep.; GAP(?); CPCo

the ACRS asked for a report on design quality and construction adequacy. They are looking for assurance that w/all the QA problems @ Midland in specific areas that we have not overlooked problems in other areas that have not yet reared their head. Is CPCo addressing this only ~~from~~ the AFW review?

But the INPO effort address "work in progress" only ~~but~~ when integrate with TERA effort, you get both.

Only for the AFW system, known as a "sample" (audit)

But it doesn't answer Okent's problem with hidden problems. INPO goes from today & does only address forward fit. They do not investigate ~~that happened previously~~ TERA later backward does.

But only for the AFW system! (We've come full circle)

(6)

Bob.

Midland SALP meeting w/ licensee + Reg III.

SALP report is pretty negative in some respects. (Copy attached). Keppler told CPCo he was concerned w/ the finding for the period 7/80 – 6/81 as that was the period just preceding his testimony on QA before the licensing Board. He told CPCo he'd have to go home & try to reconcile the differences & meet w/ them again. Stamiris was there w/ friend. We got a copy of the preliminary report w/ the letter sent to CPCo. We are preparing a Board notification to send it to the Board.

Keppler asked about deferring the 5/11-14/82 hearing session until CPCo has a chance to respond / comment on the SALP report. They have until 5/14 to comment. We have a telecon w/ Paton (OELD) + Keppler planned for tomorrow (4/27) to discuss the hrg. session. I told Keppler that any delay was up to the Board, but I think Board members are booked for the rest of the month. We (you & I) need to talk re generic issues which were @ the time the Midland FSAR / OL application was noticed

Lent have been relegated to the back burner as not qualifying as 45I's. They are all contentions in this OC hearing.

As an aside; were you aware of a remand issue on the CP that is currently before the Appeals Board on this case?

4/26/82 Midland SALP Licensee Mtg.
Manual Chapter on SALP.
Hinds' paragraphs -

- Copy of prelim. SALP to Licensee.

Cook - CPCo -
"applauding the purpose of the SALP":

Post inspection - May '81 - optimistic about ability to meet reqmt. - R-III backsliding in opinion of CPCo.

- Objected to findings on design control

- Lic. activities - "selling short" amt. of work + qual. of work earlier submitted. Work w/ staff to develop ...

Want R III to QA work before initiation. (∴ R III liable + no citations.)

Soils area - What's required needs to be defined.

Keppler - reconsid. assessment period
Point - things no better.