Wayne, Where do we stand in responding to this?

TNT is responsible for response → I think this response is acceptable. RW

I agree, its an acceptable response WS

Consumers Power Company

James W Cook
Vice President – Projects, Engineering and Construction

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

PRINCIPAL STAFF			
RA			
D/RA			✓
✓	[illegible]		
CL		FILE	[illegible]

orig+3

September 17, 1982

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

MIDLAND NUCLEAR COGENERATION PLANT
REVISED RESPONSE TO DRAFT SALP REPORT
FILE 0.6.1 SERIAL 17485

Attached is Consumers Power Company's revised response to the NRC's Preliminary SALP Report for the Midland Nuclear Plant for the period July 1, 1980 to June 30, 1981. To review the sequence of events related to this response: a Draft SALP Report was initially reviewed with the NRC during a meeting in Jackson, Michigan on April 26, 1982; the Company filed comments on the Draft Report on May 17, 1982; a meeting to discuss these comments was held in Jackson on June 21, 1982; and a meeting of our staffs took place on August 5, 1982 to discuss and reconcile differences arising out of the Draft Report and the Company's May 17 comments.

During the August 5 meeting, Consumers Power indicated that it would revise Attachment 1 of its May 17, 1982 response. The attached revision, therefore, replaces Attachment 1 to our May 17 response. Attachments 2 and 3 (as corrected in our May 21, 1982 letter) to my May 17 letter are unchanged but are attached to this response for completeness. In our revised response we have been able to take advantage of the June 21 and August 5 discussions with the Region regarding the Draft Report and our response, and additionally have had the opportunity to review again, in light of the meetings with the Region, the Report and our response in much more detail with our own personnel. As a result of all of these efforts, I believe that our comments now reflect a more full consideration and better understanding of the points raised by NRC Staff members.

James W. Cook

JWC/RAW/cl

oc0882-2422a112-100

SEP 23 1982

Distribution: Keppler (3 copies)

CC: Atomic Safety & Licensing Appeal Board
CBechhoefer, ASLB
MMCherry,Esq
FPCowan, ASLB
RJCook, Midland Resident Inspector
SGadler
JHarbour, ASLB
DSHood
RBLandsman
WHMarshall
BStamiris
MSinclair

oc0582-2048a102

Attachment 1

CONSUMERS POWER COMPANY RESPONSE TO THE DRAFT
SALP REPORT FOR THE MIDLAND NUCLEAR PLANT

Reference: 1. NRC letter; J A Hind to J W Cook; adated April 20, 1982; with Enclosures 1 and 2.

2. NRC letter: J G Keppler to J W Cock; dated July 19, 1982.

This attachment is in three parts. The first part provides general comments regarding the SALP appraisal and SALP process as a whole. The second part provides our detailed response to Enclosure 1 of the reference, the Significant SALP Report Findings. The third part provides a detailed response to Enclosure 2 of the reference, the Preliminary SALP Report, dated March, 1982, covering the assessment period of July 1, 1980 to June 30, 1981.

Part 1 - General Comments

The Company views the SALP process as a learning experience and believes that this SALP Report and the subsequent reviews and discussions held between the Company and the NRC Staff have enhanced communication between our organizations. The principal purposes of the Response to this SALP Report are as follows:

1. Providing clarifications of fact

2. Stating subsequent corrective actions regarding specific findings.

Part 2 - Response to Enclosure 1, Significant SALP Report Findings

A. GENERAL OBSERVATIONS

No Comment

B. Piping Systems and Supports

1. The Preliminary SALP Report item relating to the unavailability of Committed Preliminary Design Calculations (CPDCs) to support the drawings for small bore piping was, in our opinion, the most significant quality deficiency that occurred during this SALP period. Upon discovery of the unavailability of the CPDCs, we stopped the design work, began immediate corrective action, and did not resume the work until both the Company and the NRC Staff were assured that the process had been corrected. No pipe segments required rework as a result of this deficiency.

C. Electrical Power Supply and Distribution

The Preliminary Report notes items of noncompliance and Region III's advice as to QA/QC staffing requirements. It also notes an increase in the rigor and frequency of overview inspections in this area. The Report also recounts other steps (performance of a detailed audit and evaluations of the adequacy of QC coverage) taken to improve the QA/QC controls. While the Company agrees that items of noncompliance did occur, we believe that electrical QA/QC Staffing during the SALP period was adequate for the scope of work involved.

D. Soils and Foundations

As indicated in the cover letter to this Response, our detailed comments in this area (contained in Part 3, Paragraphs D & E below) now reflect a better understanding of the Inspectors' views as expressed in the Draft Salp Report. Attachment 3 to this response addresses an increased QA/QC scope and outlines certain steps taken to achieve an enhanced QA/QC program. For the SALP period, we believe the QA/QC staff was adequate for the scope of work.

Attachment 1

Part 3 - Response to Enclosure 2, Preliminary SALP Report

A. Section I, Introduction

No Comment.

B. Section II, Criteria

No Comment.

C. Section III, Summary of Results

1. The Company is concerned about the Category 3 ratings and although the functions receiving a rating in this category are "acceptable," the Company is committed to achieve improvements.

D. Section IV.1, Performance Analysis of Quality Assurance

1. Seven of the eight items identified from the May 1981 inspection and referenced in this section of the Preliminary Report are specifically noted elsewhere in the report under the Soils, Piping and Supports, and Electrical Sections. Therefore, we will address these noncompliances specifically in the other sections.

2. The eighth item from the May 1981 inspection dealt with the correction of adverse quality trends. The procedure in question was revised to provide more timely identification of the "root cause" and closeout or verifications regarding quality trends.

3. This section of the Preliminary SALP Report also refers to a finding of the NRC's Inspection Report 81-12, conducted May 18-22, 1981. The

Report states that "the licensee failed to fully evaluate the technical capability of the principal supplier of services for soil boring activities."

The Company's quality assurance procedures require a two-faceted evaluation of suppliers. Both the supplier's quality assurance ability and its technical ability to perform the job must be evaluated. Both of these evaluations must be documented before the contractor is allowed to begin work.

The evaluation of the supplier in question (Woodward Clyde, W/C) was carried out by MPQAD for quality assurance ability and by Design Production for technical ability. MPQAD documented W/C's quality assurance competence prior to the start of W/C's work. Before allowing W/C to proceed, MPQAD also phoned Design Production to ensure that W/C's competence from a technical standpoint was approved. Design Production documented, after the fact, the technical review that had taken place prior to start of drilling activities by W/C. W/C is a nationally-known soils testing firm. The Company does not believe that W/C's technical credentials are in dispute.

The fact remains, however, that the Company failed to document in a timely fashion its technical (as opposed to QA) evaluation of W/C's ability to perform, as required by applicable procedures. The Company concedes this failure.

5. Also, this same paragraph of the Preliminary SALP Report states:

"The NRC identified 15 deficiencies in the principal supplier's quality assurance program manual indicating that the licensee had not adequately reviewed and approved the procedures prior to preparation of drilling activities."

The reference in the Preliminary SALP Report to the "15 deficiencies" does not reflect a citation for a condition of noncompliance - only a comment on a draft set of construction procedures to be used by the Company's drilling contractor. Nevertheless, it was important to correct the items before permitting W/C to begin work. This was done.

The items of concern were discussed at a meeting between the Company and the NRC Inspector on March 26, 1981. At that time the construction procedures of W/C were still in the review cycle and had not yet been approved by the Company, a necessary step before the inception of work. W/C had recently revised its construciton procedures, and when the NRC was given a draft copy of those procedures before the meeting on the 26th, MPQAD had not completed its final review or incorporated its final comments.

The involved NRC Inspector stated that he went to the meeting on the 26th with a list of items which then were called to the attention of MPQAD. The responsible MPQAD person indicates that a few, but not all, of the items had already been observed by MPQAD and these items were intended to be corrected or clarified before approving the procedures.

E. Section IV.2, Performance Analysis of Soils and Foundations

1. The Preliminary SALP Report states:

"There was a failure to initiate audit corrective action concerning the rereview of the FSAR and references to determine if design documents had modified the FSAR and if so that changes had been made to the FSAR."

The Company's response to this item is extensively documented in the response to NRC Inspection Reports and in the Soils Hearing Record.

2. The Preliminary SALP Report notes:

"Three examples of failure to translate applicable regulatory requirements and design criteria into design documents."

a. The first example given is:

"Failure to maintain a coordination log of Specification Change Notices (SCNs)."

There are and were three separate coordination logs in the civil discipline. These logs are maintained by three different people. The Drafting Supervisor maintains the coordination log for drawings and drawing change notices. The remaining documents, including SCNs, are covered by two other coordination logs which are maintained by Discipline Aides.

The factual basis for this item of non compliance was extensively litigated during the soils hearing. Certain corrective actions, including procedural modifications and a review of civil Q specifications to insure appropriate design coordinations, should resolve NRC concerns in this area.

b. The second example given is:

"Failure to correctly translate Specification Change Notice No SCN-9004 as a requirement into Revision 20 of Specification C-208."

This item arose as a result of a difference in wording between an SCN and the specification, after incorporation of the SCN into the specification, relative to the Geotechnical Engineer's responsibilities for establishing the laboratory compaction test frequency. The SCN was issued to describe the responsibilities of the newly assigned on-site Geotechnical Engineer. The specification after incorporation of the SCN used words different from and more general than the SCN to describe the Geotechnical Engineer's responsibility for the establishment of the frequency for laboratory compaction testing. In our view, the intent of both the SCN and the specification was the same, although the language difference could reasonably have led to a different conclusion. The specification wording was subsequently changed to agree exactly with the SCN.

c. The third example given in the Preliminary SALP Report is:

"Failure of Engineering Department Project Instruction No EDPI 4.25.1, Revision 8 to establish adequate measures for design interface requirement."

The EDPI was revised after the inspection to state that it is the responsibility of the originator of a design change to coordinate the change with all groups which are affected by, or involved with, the revised portion of the document, regardless of whether the change is technical or editorial. This procedural change was made to eliminate the previous option of the Group Supervisor to waive the need for the coordination or interface when, in his judgment, it was unnecessary. In the Company's opinion, adequate interface review procedures existed prior to the procedural change although the change added an additional level of control.

3. The Preliminary SALP Report references the following item:

"Failure to establish test procedures for soils work activities."

This item of noncompliance arose out of three conditions reported as noncomplying during NRC Inspection 81-01 (January 7-9, 1981). One of the three items dealt with the absence of specific instructions indicating the depth at which field density samples should be taken. A second item involved the lack of procedures specifying how samples should be taken for relative density measurements. A third item dealt with the failure to establish procedures to correlate maximum

amplitude settings on a soil testing device, a rheostat setting, and maximum density of the soil sample being tested.

At the time of the inspection, the civil specifications under which soils placement and compaction were being performed referenced sections of the ASTM testing standards. For example, a civil specification referenced ASTM D 2049, which establishes a step by step procedure for determining relative density of cohesionless soils. According to the NRC Inspector, the statement in the SALP Report alleging a "failure to establish test procedures" referred to the lack of any procedures above and beyond the ASTM standard methods.

Further discussion during the August 5, 1982 meeting established that the NRC will accept references to high level standards, such as the ASTM, as meeting procedural requirements, providing a detailed review of the standard is carried out. In this instance, the NRC Inspector indicated that the ASTM standards were not alone sufficient because of the three particular deficiencies recited above.

As corrective action, the Company complied with the NRC's request by establishing an additional particular procedure covering soils testing, including the first item in the Inspection Report, and by revising the specification for the second item in the Report. The Company believes that the addition of these procedures has eliminated the concern in these two areas. Regarding the third item, the amplitude-density correlation, tests were carried out confirming the correlation. Therefore, in the Company's opinion, this issue could

be categorized largely as a difference of opinion between experts as to procedural details necessary to supplement the ASTM standard method being used by this soil testing consultant. In the final analysis, the Company responded fully to the NRC concern.

4. The Preliminary SALP Report also indicates a:

"Failure to supply a qualified on-site Geotechnical Engineer."

Meeting previous commitments, the Company assigned a Geotechnical Engineer to be on site during soil placement activities. The resumes of the assigned engineer ("the first engineer") and of another applicant to the position ("the second engineer") were reviewed by a cognizant NRC Inspector during an inspection held in December 1980. According to the recollection of an involved Company employee, the NRC Inspector concurred in the Company's decision to replace the first engineer with the second, who had greater practical experience than the first but who lacked an engineering degree. At a later date, another NRC Inspector reviewed the engineers' credentials. He felt that because the second engineer lacked a degree, the Company had failed to meet its commitment. The Company was cited with a deviation for failure to provide a degreed Geotechnical engineer for the job. Thereafter, the first engineer was reassigned to the on-site position. Region III concurred with this assignment.

From discussions during the August 5, 1982 review meeting it appears that disagreement regarding this issue arose out of a difference of recollection of the facts and possibly a misunderstanding by the

Company or the Inspectors. As noted, the Company immediately took the necessary steps to resolve the problem by assigning a degreed engineer to the Midland site.

5. The Preliminary Report also states:

> "It was noted in NRC Inspection Reports No 50-329/81-12; 50-330/81-12 tnat a sufficient number of qualified personnel were not available for the complex nature of the remedial soils work. This had previously been identified in NRC Inspection Reports No 50-329/81-01; 50-330/81-01, referenced previously as a deviation to a commitment."

Inspection Reports No 50-329/81-01; 50-330/81-01 deal with the deviation relative to the on-site Geotechnical Engineer. This was covered in Paragraph 4, immediately above.

NRC Inspection Reports No 50-329/81-12; 50-330/81-12 indicated the NRC's advice to the effect that additional QA/QC personnel would be needed to accommodate the forthcoming remedial soils work. The statement in the Inspection Report did not reflect a citation for noncompliance. Staff additions were in fact made to accommodate this future work in the next SALP period.

6. Finally, another item (evaluation of supplier technical capability) referenced in this section of the Report is duplicated in the Quality Assurance Section of the Report. Please refer to Part 3, Paragraph D.3, above.

F. Section IV.3, Performance Analysis of Containment and Other Safety-Related Structures

No Comment.

G. Section IV.4, Performance Analysis of Piping Systems and Supports

1. Item a(1) of this section of the Preliminary SALP Report states that:

"Bechtel Purchase Order did not specify applicable codes for purchase of 60,000 pounds of E-7018 electrode."

The original statement of the item, from NRC Inspection Reports No 329/80-20-01 & 330/80-21-01 was as follows:

'Bechtel Corporation Welding Standard WFMC-1, Revision 8, dated January 4, 1971, 'Welding Filler Material Control Procedure Specification,' Paragraph 2.1, states, in part, that '. . . welding filler material ordering information shall include the appropriate requirements of the job engineering specification, the applicable Code and this procedure specification . . .'

'Contrary to the above, on July 10, 1980, the (NRC) Inspector established (that) Bechtel Purchase Order No 7220-F-5780, dated November 2, 1973, for 60,000 pounds of E-7018 electrodes did not specify the applicable Code.'"

The Company has reviewed certified material test reports and determined that results of tests were in accord with the appropriate

(ASME) Code specification, even though a documentation deficiency failed to relate this specification to the purchase order.

Consumers Power Company has performed an audit of the procurement documentation for weld filler materials procured from 1973 through 1980. (This was reported to the NRC in the August 25, 1980 response.)

2. Item a(2) in this section of the Preliminary Report indicates that an Authorized Nuclear Inspector's hold point was bypassed for the pressurizer surge piping.

   This item was detected by the NRC Inspector on September 24, 1980. By September 25, corrective action had been taken by the Company and verified by the NRC Inspector.

3. Items a(3) and (4) indicate that large bore pipe restraints, supports and anchors were installed incorrectly and that QC Inspectors did not detect the incorrect installations. Testimony on this subject was presented during the soils hearing.

   On the basis of the NRC's findings, the Company agreed to make an extensive sampling reinspection of hangers which were installed prior to 1981. The results have been made available to the NRC.

4. Item a(5) in this section of the Preliminary SALP Report, dealing with the availability of Committed Preliminary Design Calculations for small bore pipe and piping suspension systems, was previously noted in another section of the Preliminary SALP Report (Functional

Area - Piping System and Supports). Correspondingly, our response to this item was covered in Part 2, Paragraph B of this attachment.

5. Item a(6) indicates:

> "Failure to adequately control documents used in site small bore piping design activities."

The original item from NRC Inspection Report No 50-329/81-12 and 50-330/81-12 stated that:

> "An outdated specification was maintained at the small bore piping design group work location and revised calculations were not marked 'superseded' in accordance with the procedural requirements (our emphasis)."

As process corrective action, Bechtel conducted an in-house review to assure any other outdated specifications were identified and removed. Other instances of outdated specifications were found during this audit. An audit conducted by MPQAD after this corrective action was taken found no more outdated specifications. In addition, the calculations involved in the noncompliance were checked and found to be correct. Training was conducted of all personnel in this group. A procedure was changed to require that the revision number of the specification on which the calculation is based be documented in the calculation package.

6. Item a(7) indicates that Consumers Power Company audits did not:

"Include a detailed review of system stress analysis and (did not) follow up on previously identified hanger calculation inconsistencies."

The Company did not audit for the availability and correctness of the Committed Preliminary Design Calculations as discussed in Part 2, Paragraph B, above. The audits that were made previously in this area concentrated on the completed calculations, rather than the preliminary calculations. The applicable audit checklist has since been adjusted to reflect a requirement relative to preliminary calculations.

H. Section IV.5, Performance Analysis of Safety-Related Components

1. As a result of the two original items noted in the Preliminary SALP Report, Consumers Power Company issued a formal Stop Work Order to Babcock & Wilcox and a letter to the NRC stating that the stop work would remain in effect until the corrective actions had been completed and reviewed by the NRC. Corrective actions were taken, as follows: The installation procedure for this activity was revised to clarify the method of installation and to specify the required dimensional checks. Involved B&W personnel, including inspectors, received indoctrination and training to stregthen their knowledge in this area. The Consumers Power Company overview inspection plan for this activity was revised.

I. Section IV.6, Performance Analysis of Support Systems (HVAC)

1. The civil penalty was imposed for conditions which existed prior to the assessment period in question.

2. Corrective actions in regard to these items were undertaken by the Company as documented in previous correspondence with NRC Staff.

J. Section IV.7, Performance Analysis of Electrical Power Supply and Distribution

1. Item a(1) in this section of the Preliminary SALP Report indicates a failure to establish procedures for temporary support of cable.

   The four damaged cables were repaired. The procedure was revised to require that coiled cables be properly supported and that the coil configuration does not exceed the minimum bend radius.

2. Item a(2) in this section of the Report indicates that electrical contractors did not verify conformance to Paragraph 3.1 of Project Quality Control Instruction E-5.0.

   The cable routing was rearranged to provide the required separation, which was verified by inspection. Electrical crafts and inspection personnel were formally reinstructed with regard to the separation requirements. Installation and inspection aids were provided to craft personnel.

3. Item a(3) indicates a:

   "Failure to identify and control nonconforming components."

After a thorough review of the NRC Inspection Reports for this assessment period, we believe that this item refers to a condition noted in NRC Inspection Reports No 50-329/81-11; 50-330/81-11, as follows:

> "On April 23, 1981, the (NRC) Inspectors identified 14 instances in which cable tray in the upper and lower cable spreading areas were not installed in accordance with the separation requirements delineated in the Midland FSAR and which had not been identified and controlled to prevent inadvertent use or installation . . ."

Because of a re-design of the cable spreading room late in 1979, the Company decided to change the design for cable separation devices. Under the old design, barriers were required when cable otherwise would not meet separation criteria. The new design would also use barriers, but made from different materials. Accordingly, provision for barriers under the old design was removed from cable drawings. The designers also decided that the new barriers would be added to the design at a later date because the cable re-design had to be completed before barrier design could begin. In the meantime, cable-pulling and routing could continue. When the NRC conducted its inspection, the old barriers had been removed from the drawings, giving the appearance that the cables did not meet separation criteria and lacked necessary protective barriers.

In 1979, project quality assurance issued an NCR documenting one instance of separation criteria not being met in the absence of

separation barriers. Subsequent project correspondence, issued in April 1980, documented the need for the addition of barriers in the design.

Recognizing that the old procedure could possibly lead to missed barriers, the Company upgraded Bechtel Quality Control Instruction QCI E-3.0 (following identification of the 14 nonconformances by the NRC) to require verification that barriers are properly installed after the relevant area is completed.

4. Item a(4) indicates a:

> "Failure to translate design criteria into drawings and specifications."

This inspection finding related to whether or not the color coding of instrumentation process lines was required. Based on our reading of the applicable codes and standards, it was not. However, we have responded to the NRC concern in this area by agreeing to identify the instrument process lines with a two digit alpha designator, and the specification has been changed accordingly.

5. Item a(5) indicates a:

> "Failure to identify during inspection that a nonconforming condition with regard to minimum installed cable bend radius existed."

The condition referred to was discovered during a walk through by Consumers Power Company and an NRC Inspector. A Consumers Power

Company Nonconformance Report was written to document the condition for the single cable in question. In addition to physically correcting the condition, the Bechtel Quality Control Inspector who originally inspected the cable was given an 8-hour training program in all phases of cable termination.

6. Item a(6) indicates:

> "Failure to take prompt corrective action with regard to the lack of approval of procedures for the rework of electrical raceways."

Bechtel Construction and Bechtel Quality Control developed and issued the necessary administrative guidelines and instructions.

7. Item a(7) indicates:

> "Failure to provide adequate storage conditions for (three items)."

The storage conditions for each of the items was immediately corrected. The Bechtel Maintenance Engineers were given additional training in accordance with the requirements of the field maintenance procedure. Consumers Power Company also performed a comprehensive audit to assure compliance with the field maintenance procedure.

8. The Company believes that the quantity of electrical QC inspectors employed during the SALP period was sufficient for the scope of work.

K. Section IV.8, Performance Analysis of Instrumentation and Control Systems

No comment.

L. Section IV.9, Performance Analysis of Licensing Activities

No Comment.

M. No Comment.

N. Section IV.11, Performance Analysis of Preservice Inspection

No Comment.

O. Section IV.12, Performance Analysis of Design Control and Design Changes

1. Items a(1)(a) and (b) given in this section of the Preliminary SALP Report were previously noted in Section IV.2. As such, our specific response to these items is given in Part 3, Paragraphs E.1 and E.2 and will not be repeated here.

2. Item a(2) in this section of the Report was previously noted in Section IV.4. As such, our specific response is provided in Part 2, Paragraph B and will not be repeated here.

3. Item a(3) in this section of the Report was previously noted in Section IV.7 of the Report. As such, our specific response is given in Part 3, Paragraph J.4 and will not be repeated here.

4. The five 10CFR50.55(e) items listed in this section of the Preliminary Report relate to designs which were completed before the start of the SALP period in question. Our identification of these

items during this assessment period indicates continuing design reviews.

5. We also note that there were five inspections of Bechtel Power Corporation, Ann Arbor Division, the principal engineering firm for the Midland Plant, conducted during the SALP period by the Vendor Inspection Branch of Region IV. Two of these occurred during the SALP period. The inspections covered a wide variety of design activities. For example, the October 7-10, 1980 inspection encompassed design verification, design interface, and design inspection activities. The March 31-April 3, 1981 inspection covered computer program control, technical personnel background verification, design change control and design corrective action. The two specifically referenced inspections were conducted during the SALP appraisal period. In all five inspections, there were a total of 6 nonconforming items identified, all of a relatively minor nature (nonconformances or deviations rather than violations). In two of the inspections no items of noncompliance were found. In our view, these inspections are indicative of a high degree of compliance within design segments of the Midland Project.

   (The five inspection reports are documented in letters dated April 16, 1981; October 14, 1981; November 5, 1980; June 15, 1979; and January 19, 1979, to the Bechtel Power Corporation, Ann Arbor Division, from Uldis Potapors, Chief Vendor Inspection Branch.)

6. We believe that design control, although difficult, is one of the most important aspects of nuclear power plant projects. Design

control has been complex for the Midland Project mainly because of the duration of the project and the incorporation of a multitude of new regulatory requirements into the design as it progressed. We recognize our obligation to monitor and improve our own efforts in this area and we continue to institute our own internal programs to increase our confidence in the quality of the overall design effort.

P. Section IV.13, Performance Appraisal of Reporting Requirements and Corrective Action

1. In this section of the Report, it is stated that:

> "The licensee failed to make a timely determination for the need to submit a 10CFR50.55(e) Report to the NRC based on a 10CFR Part 21 Report from TransAmerica LeLaval, Inc."

In this specific case, the DeLaval Part 21 Report was sent to Bechtel and was misrouted, such that Consumers Power Company and the appropriate Bechtel personnel were not aware of the Part 21 Report on a timely basis. In the final analysis, the condition was determined not to be 50.55(e) reportable.

Corrective actions were taken. They include issuing letters to suppliers to advise them of the person to whom Part 21 Reports should be submitted, conducting training sessions at the site for key personnel to assure that misdirected Part 21 Reports get correctly redirected, and issuing periodic memos reiterating the information offered in the training session.

2. This section of the Preliminary SALP Report also states:

> "Expeditious resolution of noncompliances is often delayed by inadequate licensee responses. The licensee has a tendency to spend too much time trying to justify why a finding is not a noncompliance rather than devoting the time to correcting the basic problem. Nine of 22 items of noncompliance were contested (excluding HVAC system noncompliances). Two of the contested noncompliances were retracted, but time and effort were lost in timely resolutions. Similar attitudes and responses have been observed regarding Company audit findings. This attitude is reflective of the licensee corrective action system and becomes a detriment to quality."

The NRC Staff has, on repeated occasions, endorsed the appeal process as a legitimate method for handling differences of opinion. It is our policy to obtain a complete, clear understanding of the basis for noncompliance and to appeal only on substantive issues upon which the Company firmly believes it has a good position on the merits.

Q. Section V.A, Noncompliance Data

No Comment.

R. Section V.B, Licensee Report Date

No comment.

S. Section V.C, Licensee Activities

No comment.

T. Section V.D, Inspection Activities

No Comment

U. Section V.E, Investigations and Allegations Review

No Comment.

V. Section V.F, Escalated Enforcement Actions

1. The civil penalty was imposed for conditions which existed prior to the assessment period corresponding to this SALP Report although the investigation was completed during the SALP period.

W. Section V.G, Management Conferences

No Comment

COMPARISON OF TESTIMONY OF JAMES G KEPPLER BEFORE THE ASLB ON JULY 13-14, 1981 WITH FINDINGS IN THE DRAFT SALP REPORT

Introduction

On July 13-14, 1981, Mr James G Keppler, the Director of the Region III Office of Inspection and Enforcement, testified that the NRC has reasonable assurance that quality assurance and quality control programs at Midland will be appropriately implemented with respect to future soils construction activity, including remedial actions. In March 1982, Region III issued its Preliminary SALP Report on the Midland Plant. Nothing in the SALP Report contravenes Mr Keppler's testimony regarding reasonable assurance. All of the information contained in the SALP Report was known to Mr Keppler at the time he testified.

1. Quality Assurance

   a. SALP Analysis

      The report notes the creation of the MPQAD and Consumers Power's assumption of responsibility for onsite quality control and quality assurance functions for the installation of the HVAC systems. It also lists the findings of NRC Inspection Report No 81-12. The report concludes:

      > The licensee is rated Category 2 in his overall quality assurance capability. Notwithstanding weaknesses identified in specific areas, the licensee has been responsive in establishing an overall effective organization for the management of construction and implementation of quality assurance at the site.

   b. Prior Testimony

      Mr Keppler testified extensively regarding NRC Inspection No 81-12,[1] the MPQAD[2] and the Zack matters.[3] Mr Keppler initiated NRC Inspection No 81-12 for the purpose of determining the efficacy of the MPQAD.[4] Mr Keppler personally inspected the work of the NRC inspectors at the conclusion of the inspection,[5] participated in drafting the inspection report, and signed the final report.[6] Mr Keppler concurred in the report's conclusion that, although some problems were identified, the MPQAD and the quality assurance program at Midland were working quite well.[7] Mr Keppler also described the corrective actions Consumers Power had taken with regard to Zack, and concluded that the Zack problem did not indicate a broader breakdown in quality assurance.[8]

2. Soils and Foundations

a. SALP Analysis

The SALP Reports lists the soils-related noncompliances and deviations identified in NRC inspections of Midland during the SALP evaluation period (July 1, 1980 to June 30, 1981). The report concludes that:

> The licensee is rated Category 3 in this area. The enforcement history indicates that additional licensee attention is warranted.

b. Prior Testimony

The evidence before the Licensing Board shows that Mr Keppler was thoroughly familiar with the 1980-81 enforcement history relating to soils issues when he made his judgment regarding reasonable assurance at Midland. Mr Keppler was Regional Director of Region III during this period and signed all of the NRC inspection reports listed in the SALP analysis.[9] He testified in detail about many of the soils problems identifed in these reports.[10] He explained that all of the soils problems identified in 1980-81 were carefully reviewed and reassessed, and all pertinent records covering summer 1980, to May 1981 were examined, in arriving at the conclusion of reasonable assurance in May 1981.[11] Mr Keppler specifically noted that the history of soils work at Midland did not contravene his judgment of reasonable assurance. The soils problems, he testified, "can be largely attributed to the failure to fully recognize the importance of the application of quality assurance to soils work (but) the importance of quality assurance to soils work and to consequent remedial actions at the Midland site is now fully recognized" by Consumers Power.[12]

3. Containment and Other Safety-Related Structures

a. SALP Analysis

"The licensee is rated Category 2 in this area. The licensee's performance appears to be satisfactory; no significant strength nor weaknesses were identified."

b. Prior Testimony

Mr Keppler did not testify on this subject.

4. Piping Systems and Supports

a. SALP Analysis

The Report lists seven items of noncompliance identified by NRC Staff inspections during the evaluation period. Based on five of these

items, an Immediate Action Letter (IAL) was issued on May 22, 1981. The report concludes:

> The licensee is rated Category 3 in this area. The enforcement history is indicative of weaknesses in the implementation of the quality assurance program.

b. Prior Testimony

Mr Keppler testified regarding the piping problems identified during NRC Inspection No 81-12 in May 1981.[13] He explained that problems with piping systems are an industry-wide concern that is receiving considerable Region III attention.[14] Problems are being identified in this area at almost every nuclear site inspected.[15] The NRC Staff inspector who identified the piping problems at Midland is at the forefront of knowledge in this area, and did not consider the incidents at Midland to be significant.[16] NRC Inspection No 81-12 confirmed that the methodology of the design, installation and quality control inspection of the piping and support system was acceptable.[17] It was the unanimous view of the inspection team that the problems identified were isolated, and not indicative of any major programmatic weaknesses in the implementation of the program.[18]

5. Safety-Related Components

a. SALP Analysis

The report lists the two items of noncompliance which culminated in Consumers Power's issuance of a letter of understanding on January 22, 1981. The report concludes:

> The licensee is rated Category 2 in this area. The above enforcement was aimed at an isolated instance and may have been directly related to change in NSSS QC personnel changes. The licensee had in the past and since this episode maintained adequate QA control for the assembly of NSSS equipment.

b. Prior Testimony

No testimony was given on this subject.

6. Support Systems

a. SALP Analysis

The report notes the quality assurance deficiencies and the Civil Penalty of the previous SALP evaluation period. It commends Consumers Power's "aggressive action" in taking over complete responsibility for quality assurance and quality control in HVAC installations; this action resulted in significant improvement in control over the installations and in correction of identified weaknesses. The report concludes:

The licensee is rated Category 1 in this area. Management attention and involvement has been aggressive in accepting full QA/QC responsibility and supporting this organization with an adequate number of skilled personnel.

b. Prior Testimony

Mr Keppler testified that the HVAC problems problem did not indicate a broad breakdown in quality assurance.[19]

7. Electrical Power Supply and Distribution

a. SALP Analysis

The report listed seven noncompliances identified during the evaluation period and concluded:

The Licensee is rated Category 3 in this area. The enforcement history indicates a lack of management attention and involvement. This is evident by apparent inadequate preplanning and assignment of priorities as activities increased, a poor understanding of procedures for control of activities and minimal QC Staffing for the magnitude of the activities.

b. Prior Testimony

Mr Keppler testified that electrical work was extensively reviewed during the May 1981 NRC Staff inspection of Midland.[20] The inspection team reviewed five areas within electrical work: quality assurance records, quality assurance implementing procedures, quality control personnel, visual inspection of electrical work activities, and Consumers Power's actions on previously identified items.[21] Only four problems were identified.[22] These problems were isolated and not indicative of any major programmatic weaknesses in the implementation of the program.[23] The inspection report also commended Consumers Power for several aspects of their electrical work program. First, the program and its implementation regarding calibration of termination tools was judged to be satisfactory.[24] Second, Consumers Power had taken timely and comprehensive actions to correct areas addressed on previous NRC inspections.[25] Finally, the quality assurance (electrical) organization was found to be strong and capable.[26]

8. Instrumentation and Control Systems

a. SALP Analysis

"The Licensee is not rated in this area because a minimal amount of instrumentation installation and minimal inspection effort during this evaluation period."

b. Prior Testimony

There was no testimony on this subject.

9. Licensing Activities

a. SALP Analysis

"The Licensee is rated Category 2 in this area. Early responses during the evaluation period were lacking in responsiveness. However, the more recent responses tend to be substantive and of acceptable quality."

b. Prior Testimony

Mr Keppler did not testify on this subject

10. Fire Protection

a. SALP Analysis

"The Licensee is rated Category 1 in this area. Management attention has resulted in a high level of performance in this area."

b. Prior Testimony

There was no testimony on this subject.

11. Preservice Inspection

a. SALP Analysis

The Licensee is rated Category 2 in this area. The Licensee's performance appears satisfactory, no specific strengths nor weaknesses were identified."

b. Prior Testimony

There was no testimony on this subject.

12. Design Control and Design Changes

a. SALP Analysis

The report notes four design control related noncompliances identified by NRC inspections and five licensee-controllable Construction Deficiency Reports indicating a lack of quality assurance in design control during the evaluation period. The report concludes:

> The licensee is rated Category 3 in this area. The amount of re-engineering that has transpired in electrical, civil and piping areas and the specific design control weaknesses discussed in

Soils and Foundations, Piping Systems and Supports and Electrical Power Supply and Distribution indicate significant weaknesses in overall design control.

b. Prior Testimony

Mr Keppler did not consider the problems identified in the piping system to be a significant concern.[27] He also testified that noncompliances identified by NRC inspections in the soils area, although of concern, did not contravene his judgment of reasonable assurance.[28] Another NRC Staff witness, Mr Gilray, confirmed that the two soils noncompliances referenced here by the SALP Report were not substantive and did not bring the adequacy of Consumers Powers procedures into question.[29] The May 1981 NRC inspection affirmed the adequacy of the electrical program at Midland.[30] Mr Keppler did not identify design control as a significant quality related problem.[31]

13. Reporting Requirements and Corrective Action

a. SALP Analysis

The report notes that Consumers Power contested several apparent items of noncompliance during the evaluation period, and concludes:

> The Licensee is rated Category 3 in this area. The licensee responses to enforcement items and internal audit findings are often delayed requiring repeated submittal to obtain acceptable resolutions.

b. Prior Testimony

Mr Keppler testified that Consumers Power had responded to all items of noncompliance identified in NRC inspection reports. He noted that Consumers Power agrees with some such items and disagrees with others. Mr Keppler stated that the fact that Consumers Power does not agree with an apparent item of noncompliance is not a sign of poor management attitude. If there is a valid reason to disagree with the item, he added, then they should disagree with it. This is a normal part of the give and take between the NRC Staff and the licensee.[32]

1/ Keppler, Tr 1884-47, 1981-77, 1981-83, 1998-2002, 2004-09, 2076-84.

2/ Keppler, Tr 1973-76.

3/ Keppler, Tr 1935-36, 1964-66, and prepared testimony at p 4, following Tr 1864.

4/ Keppler, prepared testimony at pp 4-7, following Tr 1864.

5/ Keppler, Tr 2078-79.

6/ NRC Staff Exhibit No 1; Keppler, Tr.

7/ Keppler, Tr 1973.

8/ Keppler, Tr 1935-36, 1964-66 and prepared testimony at p 4, following Tr 1864.

9/ NRC Staff Exhibit No 1 (NRC Staff Inspection Report No 81-12); Staff Exhibit No 3 (NRC Inspection Report No 81-09), Gallagher, prepared testimony, Attachment No 3, (NRC Inspection Report No 80-32/80-33), following Tr, 1754.

10/ Keppler, Tr. 1935-36, 1964, 66 1887, 1942, 2002-09, 2013-2017 and prepared testimony at pp 4-5, 7 9, following Tr 1864.

11/ Keppler, Tr 1913-14, 1977, 1982-83, 2083.

12/ Keppler, prepared testimony at p 8, following Tr 1864.

13/ Keppler, Tr 2004-09, 2017, 1942.

14/ Keppler, Tr 2006-09.

15/ Id.

16/ Id.

17/ Id, prepared testimony, Attachment No 2, at p 5, following Tr 1864.

18/ Id, prepared testimony at p 8, following Tr 1864.

19/ Id., at p 4.

20/ Keppler, Tr 2076-78, and prepared testimony at p 7, following Tr 1864.

21/ Id, prepared testimony, Attachment No 2, at p 11, following Tr 1864.

22/ Id, at p 11-12.

23/ Id, prepared testimony at p 8, following Tr 1864.

24/ Id, prepared testimony, Attachment No 2 at p 12, following Tr 1864.

25/ Id

26/ Id

27/ See discussion supra under "Piping Systems and Supports."

28/ See discussion supra under "Soils and Foundations."

29/ Gilray, Tr 3742-43 (testifying regarding the soils noncompliances identified in NRC Inspection Reports No 80-32 and 80-33)

30/ See discussion supra under "Electrical Power Supply and Distribution."

31/ Keppler, prepared testimony at p 4, following Tr 1864.

32/ Keppler, Tr 2083-84

ANALYSIS OF CURRENT AND FUTURE QUALITY ACTIVITIES WITH REGARD TO REMEDIAL SOILS WORK

At the April 26, 1982 SALP meeting Region Administrator, Mr J G Keppler, expressed concern that his staff had informally characterized the ongoing soils and foundation work as only minimally acceptable. Mr Keppler asked CP Co's management to comment on its impression of this characterization and to provide its suggestion as to how this assessment could be improved.

The following consists of a brief analysis of what Consumers Power perceives to be the basis for this informal characterization and a description of some of the current organizational and programmatic features of the soils activities that lead us to conclude that prospects are excellent for the satisfactory execution of the remaining soils and foundation work.

The soils-related activities at the Midland job site are currently at a relatively low level pending completion of the NRC staff's technical review and release, by the NRC, of the major portion of the remedial work still to be undertaken. The work that has been done thus far in 1982 is concentrated in two areas. First, a significant number of wells have been drilled at the site, as part of the plant dewatering systems, as part of the freeze wall associated with the auxiliary building underpinning activity and to support the site drawdown tests. Second, the major contractor for the auxiliary building underpinning work was mobilized; the initial work on the access shaft was completed; and, in parallel the detailed underpinning construction planning and continuing technical review with the NRC staff of subsequent work was carried out. Very little work in the other remedial soils areas has been accomplished during this period.

In responding to Mr Keppler's comments at the SALP meeting, we believe that the basis for the staff's informal negative comments regarding the current soils quality assurance activities can be traced to one specific area of concern and one more broadly-based general concern. A discussion of each of these follows.

A specific area of work which may have been of concern to the staff, and one of immediate concern to Consumers, relates to the controls on the drilling and excavation activities that have been recently carried out. Because the number of NCR's that had been written in this specific area and the severity of the most recent occurrence (drilling into an electrical duct bank), the Company concluded that even with the formal controls that were previously in place, additional controls were required. As a result on April 28, the Company issued a stop work on all drilling by Mergentine and its subcontractors. (This Consumers Power stop work direction preceded the ASLB Order of April 30, 1982.) As of May 12, the stop work order had not been removed, nor will it be until a new detailed drilling and excavation control procedure has been fully reviewed and accepted by Consumers Power Company. While there had been other corrective action taken prior to the CP Co stop work order, the Company is confident that the comprehensive revisions to the prior control procedures on drilling and excavation will preclude errors of the type recently

experienced, and will assure that future drilling and excavating work will be carried out in a satisfactory and controlled manner.

The general and considerably more significant area of inferred NRC concern can only be identified as the lack of timely agreement between the Company and the NRC on the specific quality assurance coverage requirements to be imposed on the remedial soils work, particularly those to be imposed on the underpinning work. The lack of timely resolution of this issue, the apparent misunderstanding regarding the Company's commitments, and the contentious atmosphere at the March 10, 1982 meeting on this subject and at the subsequent inspection undoubtedly contributed to the negative rating informally expressed by the staff.

When the auxiliary building underpinning work started with the first partial NRC release for construction of the vertical access shaft, CP Co presented a special quality assurance plan encompassing, in our opinion, appropriate portions of the underpinning work. This plan was initially presented to the staff at a meeting in Region III headquarters on January 12, 1982 and documented in a letter dated January 7, 1982. While the initial staff response to the plan appeared to be favorable, no official NRC conclusion was expressed. It became evident during the time between January and early March that at least one individual within the NRC staff believed that an extensive modification of the program coverage under the QA plan, MPQP-1, should be required. This preference for expanded NRC requirements became an NRC staff working level position, formally expressed to the Company at the meeting on March 10, 1982. As a result of that meeting, the NRC Region III inspector apparently concluded that Consumers had committed to fully accepting the NRC Staff position that essentially all to-go underpinning work should be Q-listed, unless exceptions are agreed upon. The NRC's meeting minutes reflect no such commitment. In fact, no commitment was made. This misunderstanding, and others arising out of follow-up discussions with the staff, has apparently affected Region III's feelings toward our soils quality assurance program and personnel. It is, therefore, not surprising that the NRC Region III staff considers the quality assurance activities in the soils and foundation area to be in need of improvement based on its recent experience. (It should also be noted that the NRC SALP Board held its second and final meeting on March 23, 1982.) The Company also agrees that it is extremely difficult to avoid regulatory difficulties unless both parties have a common understanding and agreement as to the scope of applicable requirements. The major issue with regard to QA program coverage was resolved at the management level meeting held on March 30, 1982 in Glen Ellyn and documented by the April 5, 1982 letter of J W Cook to J G Keppler, in which the Company agreed to "Q" list essentially all of the to-go underpinning work. However, the staff has still not formally acknowledged its concurrence with that letter. This concurrence would be of significant assistance in documenting the conclusion of the staff's review of program requirements and permitting the redirection of resources from program definition to successful program execution.

Resolution of the concerns noted above will make a significant contribution to the remaining soils work. In addition, the following considerations should provide added confidence that excellent results will be obtained in the remaining soils construction activities.

Dedication of a high quality professional staff to the underpinning and other soils work is of paramount importance to its successful completion. Because of the complexity and importance of the underpinning work as the dominant factor in the soils remedial program, a mini-project of dedicated groups has been set up to focus attention on the soils activities, with particular emphasis on the underpinning. The technical qualifications of the individuals staffing these activities emphasize previous related experience. At the site, specific underpinning groups have been formed within Bechtel construction, Bechtel quality control and MPQAD, all staffed with individuals having significant applicable technical experience and academic credentials. Both Bechtel resident engineering and Bechtel engineering in Ann Arbor have dedicated remedial soils groups. The onsite resident engineering office will have four geotechnical engineers and at least two structural engineers dedicated to supporting the field activities. Consumers Power Company home-office soils activities are currently staffed with two experienced geotechnical engineers and several experienced structural engineers who have been active in the design reviews and prior licensing evaluations and who will continue to follow the soils remedial work throughout the duration of the construction. The overall Consumers Power Company project management of soils is also organized as a mini-project, and the senior Consumers Power Company individual has had significant nuclear power plant experience at the project manager level.

In addition to the on-staff individuals for Consumers Power Company, Bechtel and the major subcontractors, significant consulting resources are also integrated into the soils work. The design consulting firm for the auxiliary building underpinning has a staff man onsite to coordinate with his home office personnel. All the major consultants will be asked to periodically review the job progress as the underpinning work proceeds.

To assist some of the technical specialists in fully understanding all of the quality requirements on the job, some additions to the staff are also planned. The Bechtel underpinning construction group leader, who oversees and interacts with the underpinning subcontractors, will have a quality consultant on his staff to assist him in any and all quality-related matters. It is also anticipated that the underpinning quality control organization will be augmented to enhance its breadth of leadership.

We believe that the NRC themselves can significantly assist in the successful completion of the underpinning and other soils remedial activities by expanding the presence of their lead inspector on the site as the work progresses. Specific steps to facilitate this NRC interaction were agreed upon, as documented in the April 5, 1982 letter referenced above, and complemented by day-to-day working agreements.

A second area which should significantly assist in the successful completion of the remedial soils work, particularly the underpinning activities, is the degree of design completion prior to the work entering the major construction phase. Because of the extent and thoroughness of the NRC staff review, there is a more complete design for the underpinning activities than is normally in place for other construction activities. Essential completion of the calculations for the underpinning work before the major construction phase

begins will minimize the kind of major design changes that can occur in nuclear plant structural design process because of calculation revisions. There will, of course, be design changes as the work progresses, but the degree of calculation completeness reached prior to initial drawing release will significantly contribute to the stability and success of the construction process.

In addition to the degree of completeness in the underpinning design activity, the interface review called for by the quality assurance plan for the underpinning activity, MPQP-1, is also substantial. These reviews will also contribute to both the validity of the design and the general understanding of design requirements and quality attributes by all persons participating in the underpinning activities. In addition, MPQP-1 directly inserted quality assurance (and through quality assurance, quality control) comments into the design review cycle, a significant requirement above and beyond the quality assurance program for the balance of the plant.

The number of procedural controls that have been or are being instituted for this work should also engender confidence that the critical underpinning activities will be satisfactorily controlled. Judging from the work to date, there will be more than 50 specific work procedures developed for the underpinning work. MPQP-1 calls for integration of inspection hold points directly in these construction work procedures. As a result of these steps, the procedural controls for the underpinning work will be more extensive than those for any other activities, with the possible exception of NSSS primary loop activities, covered by the QA program for the balance of the project. The extent of the construction procedures automatically increases the scope of the training activities and of the inspection plans which are developed based on the specific work procedures.

Finally, as a result of the extensive discussions with the NRC staff regarding the coverage of the "Q" program, MPQP-1 is being applied to essentially all of the underpinning work still to be done. While this application may or may not be completely consistent with a strict definition of what is "safety-related," it should lend added assurance that the work in total, and the safety-related work in particular, will be carried out successfully.

In light of the foregoing, it is hoped that the Region III management can gain an appreciation of Consumers Power Company's perception of recent events and that both the Region III management and staff can develop added confidence that the to-go soils work, particularly the extensive underpinning activities, can and will be carried out up to the expectations of both the applicant and the NRC.

July 19, 1982

Docket No 50-329 82-14
Docket No. 50-330

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

Gentlemen:

This refers to the management meeting held by me and other NRC representatives with you and other representatives of Consumers Power Company in Jackson, Michigan, on April 26 and June 21, 1982, to review the results of the NRC's evaluation of the utility's regulatory performance at the Midland Nuclear Plant in connection with NRC Manual Chapter 0516 - Systematic Assessment of Licenseee Performance (SALP) and covers the period July 1, 1980 through June 30, 1981.

A preliminary copy of the SALP Report was provided to you in advance of our meeting. This report is enclosed, along with the written comments you provided on May 17, 1982.

Your May 17, 1982, response to the SALP Report took issue with a number of findings and evaluations presented by the SALP Board. As discussed at the June 21 meeting, the NRC representatives were not pursuaded by the arguements presented and it is apparent that NRC and Consumers Power Company management have differing views as to the facts surrounding several identified concerns. I intend to contact you in the near future to arrange one or more "working" meetings between our staffs in an attempt to clarify the disputed issues. Following completion of that effort I will give you my overall observations and assessment of the utility's performance during the appraisal period along with comments I believe are appropriate relative to your May 17 letter.

8208090220

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the SALP Report will be placed in the NRC's Public Document Room.

No reply to this letter is required; however, should you have any questions concerning these matters, we will be pleased to discuss them with you.

Sincerely,

Original signed by
James G. Keppler

James G. Keppler
Regional Administrator

Enclosure: SALP Reports
No. 50-329/82-14 and
No. 50-330/82-14

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
Michael Miller
Ronald Callen, Michigan
Public Service Commission
Myron M. Cherry
Barbara Stamiris
Mary Sinclair
Wendell Marshall
Colonel Steve J. Gadler (P.E.)

RIII	RIII	RIII	RIII	RIII	RIII
Tambling/sv	Spessard	Norelius	Hind	Davis	Keppler
7/13/82	7/16	7/16	7/16	7/16	7/19/82

SALP RIII

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

Consumers Power Company

MIDLAND NUCLEAR PLANT, UNITS 1 AND 2
Docket Nos. 50-329; 50-330
Reports No. 50-329/82-14; 50-330/82-14

Assessment Period
July 1, 1980 to June 30, 1981

March 1982

CONTENTS

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:

This is to confirm the conversation between Mr. D. J. Vande Walle and Mr. D. C. Boyd of the Region III staff scheduling April 26, 1982 at 1:00 p.m. as the date and time to discuss the Systematic Assessment of Licensee Performance (SALP) for the Midland Nuclear Plant, Units 1 and 2. This meeting is to be held at the Sheraton Hotel, One Jackson Square, in Jackson, Michigan.

Mr. James G. Keppler, the Regional Administrator, and members of the NRC staff will present the observations and findings of the SALP Board. Since this meeting is intended to be a forum for the mutual understanding of the issues and findings, you are encouraged to have appropriate representation at the meeting. As a minimum we would suggest Mr. J. D. Selby, President, Mr. R. J. Reynolds, Executive Vice President, or Mr. J. W. Cook, Vice President Midland Project and managers for the various functional areas where problems have been identified.

The enclosed SALP Report which documents the findings of the SALP Board is for your review prior to the meeting. Subsequent to the meeting the SALP Report will be issued by the Regional Administrator.

Enclosure 1 to this letter summarizes the more significant findings identified in the SALP Board's evaluation of the Midland Nuclear Plant, Units 1 and 2 for the period of July 1, 1980 to June 30, 1981.

If you desire to make comments concerning our evaluation of your facility, they should be submitted to this office within twenty days of the meeting date; otherwise, it will be assumed that you have no comments.

In accordance with Section 2.790 of the NRC's "Rules of Practice" Part 2, Title 10, Code of Federal Regulations, a copy of this letter, the SALP Report, and your comments, if any, will be placed in the NRC's Public Document Room when the SALP Report is issued.

Comments requested by this letter are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-5111.

If you have any questions concerning the SALP Report for the Consumers Power Company we will be happy to discuss them with you.

Sincerely,

J. A. Hind, Director
Division of Emergency Preparedness
and Operational Support

Enclosures:
1. Significant Findings
2. Midland SALP Report
(5 copies)

cc w/encls:
Resident Inspector, RIII

Enclosure 1

Significant SALP Report findings for the Midland Nuclear Generating Station.

General Observations

The Board notes improvements in the overall Quality Assurance program at the Midland site. An indepth team inspection, performed in May of 1981, indicates that Consumers Power Company has established an effective organization for the management of QA/QC activities at the site. The numbers and qualifications of personnel in the QA/QC organization and the overview and audit functions performed were found to be above that normally found at other construction sites.

During the July 1, 1980 to June 30, 1981, evaluation period the Licensee's performance in resolving technical and quality issues in the installation of piping and piping suspension systems (particularly small bore piping), in the pulling of electrical cables and in the handling of soils and foundation problems was less than desired. The licensee's QA/QC capabilities were not fully and effectively utilized as expected in these specific areas to insure adequate preplanning and timely review and control of quality activities.

The licensee's performance in most other area's has been satisfactory and a significant improvement has been achieved in the licensee's resolution of the heating, ventilating, and air conditioning problems identified in the previous evaluation period (SALP 1).

In the less technical, administrative areas, regarding corrective actions and reporting, the licensee has frequently demonstrated an argumentative attitude in their responses to NRC enforcement issues. This has resulted in management meetings with the licensee, subsequent to the SALP evaluation period, for further discussion and clarification of this area. Should the licensee offer strong responsible management conviction to resolving the reporting and corrective action issues, a turn-around in these areas can be expected.

Functional Area

Piping System and Supports

During the evaluation period, weaknesses were identified in the implementation of the quality assurance program. An Immediate Action Letter was issued May 22, 1981, pertaining to the design control and issuances of drawings for the installation of small bore piping and support systems. While in the process of reviewing and resolving these concerns, the licensee was found in noncompliance in another area. This resulted in issuance of a letter of understanding by the licensee for the control of modifications to small bore piping drawings which do not have committed Preliminary Design Calculations.

Electrical Power Supply and Distribution

The licensee had embarked on an ambitious "pulling schedule" commencing half way through the evaluation period. Prior to this, the NRC had verbally advised the licensee to have adequate number and quality of QA and QC personnel available when escalated electrical installation activities commenced. Seven items of noncompliance identified during the evaluation period indicated a lack of rigorous QC coverage. Subsequently, the licensee has increased the rigor and frequency of overview inspections, performed a detailed audit pertaining to material storage and brought upper management's attention to the findings, and is presently inquiring into the adequacy of electrical QC coverage. Both NRC and licensee attention should be increased.

Soils and Foundations

There had been considerable activity in the soils and foundations area during the past three years. The enforcement history indicates a lack of attention to detail by the licensee and a continuing inability on the part of the licensee to successfully implement proposed resolutions of the soils settlement issues. This performance has resulted in several management meetings both in the NRC Headquarters offices and in the regional offices to discuss these matters and to delineate the NRC enforcement posture to the licensee.

These regulatory concerns primarily focusing on the limited QA/QC coverage provided have been expressed in the past during the taking of soil borings and installation of dewatering wells and simular concerns have been expressed during the earlier stages of the remedial soils work. Both NRC and licensee attention should be increased.

Consumers
Power
Company

James W Cook
Vice President - Projects, Engineering and Construction

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

May 17, 1982

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

MIDLAND PROJECT
RESPONSE TO DRAFT SALP REPORT
FILE 0.6.1 SERIAL 17485

On April 26, 1982, Mr J G Keppler and members of the NRC Region III staff met with Consumers Power Company personnel in Jackson where the NRC presented the observations and findings of the Midland SALP board for the period July 1, 1980 to July 30, 1981. At the conclusion of that meeting we were informed that we should make written comments to the Region III office within 20 days of that meeting date. This letter transmits Consumers Power Company's response to the draft SALP evaluation report and to other comments made by Mr Keppler at that meeting.

Our general reaction to the SALP evaluation can be summarized as follows: We support the SALP goals and objectives because we believe it is vital to have an active and continuing dialogue with those who have direct regulatory responsibility for the Midland Nuclear Plant. We do believe, however, that the SALP process has not yet reached maturity and there are areas where the process can be made more effective. With regard to the specific contents of the draft SALP report, we are concerned with what we believe is an unnecessarily negative characterization of the inspection results for the period covered by the SALP report. Because of this concern and our belief that the facts do not support the characterization presented by the authors of the draft SALP report, we have spent considerable time reviewing the detailed information on which the draft SALP report was based, and this analysis forms the basis of our attached response. We believe a careful review of this material will enable Region III management to understand the basis for our concern and to gain an appreciation for our perspective in this matter.

In addition to the review of the draft SALP report, Mr Keppler made several comments at the April 26 meeting regarding his own participation in both the NRC team inspection of May 1981 and his subsequent testimony in the ASLB hearings on the soils matter. In order to respond to those comments we have also included additional material and analyses that directly respond to Mr Keppler's comments.

Our detailed response to the SALP report and Mr Keppler's comments has been divided into three attachments transmitted with this letter. A description of each of the attachments follows.

Attachment 1 is a detailed review of the entire draft SALP report and the inspection results upon which the SALP report was based. We conclude that the details of the SALP analysis support a more positive conclusion than was presented at the SALP meeting. The basis for this suggestion is that there appears to be considerable overstatement of the actual severity of the inspection findings, some factual errors and omissions within the draft SALP report itself, and further, there are some assignments to this SALP evaluation of events that occurred prior to the SALP evaluation period, all of which contribute to an unnecessarily harsh characterization of the Midland Project regulatory performance during this SALP evaluation period. Attachment 1 also contains our comments on the SALP process.

Attachment 2 to this letter is a comparison of Mr Keppler's testimony in the Midland soils hearing with the specifics of the draft SALP report. This detailed comparison concludes that even with the generally negative characterization of the Midland Project by the SALP board, there is still no contradiction of Mr Keppler's prior testimony by the draft SALP report nor any need, in our opinion, for him to modify that testimony.

The third attachment to this letter entitled "Analysis of Current and Future Quality Activities With Regard to Remedial Soils Work," addresses specific questions raised by Mr Keppler at the conclusion of the SALP meeting. This attachment points out that there appear to have been considerable regulatory difficulties experienced by the Midland Project during the past two months, mainly because of the inability of the NRC staff and the Company to finalize the quality assurance program coverage requirements for the soils remedial work, particularly for the underpinning activities. Attachment 3 points out that this difficulty appears to have been generally resolved and that there are numerous reasons for confidence that with the regulatory requirements properly defined, the remaining soils work can be carried out in a fully satisfactory manner.

Consumers Power Company urges the Region III management and staff to carefully consider the information and reasoning contained in this response to the April 26, SALP meeting. We believe that there is ample basis for the Region Administrator to reaffirm his 1981 overall team inspection findings in his overall conclusion to the 1980/1981 SALP evaluation.

Finally, as noted previously, we were disappointed with the negative tone of the draft SALP report. We take very seriously the comments made by the Region III SALP board members and will do whatever we can from the applicant's point of view to engender productive working relationships with the staff and to be responsive to the staff's concerns. Nevertheless, we must disagree with some of the material in the draft SALP report, and we request the opportunity to meet with Mr Keppler and his staff to review the detailed contents of this response.

James W. Cook

JWC/WRB/aat

viii

oc0582-2048a102

Distribution: Keppler (3 copies)

CC: Atomic Safety & Licensing Appeal Board
CBechhoefer, ASLB
MMCherry,Esq
FPCowan, ASLB
RJCook, Midland Resident Inspector
SCadler
JHarbour, ASLB
DSHood
RBLandsman
WHMarshall
BStamiris
MSinclair

CONSUMERS POWER COMPANY RESPONSE TO THE DRAFT SALP REPORT FOR THE MIDLAND NUCLEAR PLANT

Reference: 1. NRC letter; J A Hind to J W Cook; dated April 20, 1982; with Enclosures 1 and 2.

This response is in three parts. The first part provides a general response to the SALP appraisal and SALP process as a whole. The second part provides our detailed response to Enclosure 1 of the reference, the Significant SALP Report Findings. The third part provides a detailed response to Enclosure 2 of the reference, the Preliminary SALP Report, dated March, 1982, covering the assessment period of July 1, 1980 to June 30, 1981.

Part 1 - General Response

A. We are encouraged by the general statements to the effect that the NRC sees progress in Consumers Power Company's overall quality assurance program and in its management. Undoubtedly, there has been improvement in our regulatory performance from the 79/80 assessment period to the 80/81 period and from the 80/81 period to the present. Literally, dozens of actions have been taken in order to achieve this improvement. These actions have been communicated to the NRC.

   In May, 1981, Mr Keppler and members of his staff performed an extensive team inspection from which they concluded that ". . . the scope and depth of this NRC inspection was such that the identified noncompliances do not contravene our conclusion that Consumers Power Company has established an effective organization for the management of construction and implementation of quality assurance at the site."

B. We are, however, disappointed by the overall negative tone of the draft SALP Report. Nonetheless, we continue to be dedicated to attaining two goals:

   1. First and foremost, to ultimately assure that the as-built configuration of the plant is in conformance with all regulatory and design requirements; and,

   2. To continue to improve our regulatory performance.

C. We welcome feedback relative to our regulatory performance--the sooner the better. We have encouraged such feedback in a number of ways, and we shall continue to do so. A number of meetings with Region III management and staff have been at our initiative. On numerous occasions we have proposed the establishment of routine, periodic meetings to exchange information with Region III's home office staff. On our own initiative, we submitted our Preoperational Testing Manual in order to obtain Region III review and comments at an early date. Our specific invitation may have contributed to Mr Keppler's personal participation in the NRC team inspection conducted in May, 1981. We have proposed that an NRC Inspector be on site as much of the time as possible to assess our remedial soils work. Of course, at the completion of NRC inspections, exit interviews with the Inspectors are a routine feedback mechanism.

x

D. In reviewing how to improve the Company's overall regulatory performance, it becomes evident that the most timely regulatory feedback is that which is received before the accomplishment of the work in question. While both Consumers and the NRC attempt to achieve this objective, we believe both our organizations have fallen short in this area.

It is our recommendation that the NRC consider scheduling seminars for the various ongoing nuclear construction jobs as they approach each major phase. One purpose of these seminars would be to review the detailed quality programs and procedure for each major new activity at each job. This review would verify that all programmatic requirements at the detailed level were in place prior to the work or could be upgraded before the fact to meet Region III expectations. In addition, the NRC inspection specialists could review with the applicant's quality personnel typical detailed inspection plans used by the NRC in their on-site inspections. At the same time, discussions of actual experience from other earlier construction sites could make the Licensees for current construction sites more aware of and responsive to potential problems in the work area about to begin.

We in industry have tried to accomplish this objective with our various regional and industry groups, and by reviewing inspection reports from other jobs. However, these efforts suffer by lack of NRC input at detailed working levels. We urge the NRC to consider this type of an approach to supplement their other inspection programs.

A specific benefit to Midland's future performance has already occurred as a result of this concept It was mentioned at the SALP meeting that we had submitted our Test Program Manual to Region III some time ago in order to obtain feedback prior to the start of detailed systems testing. Even though some testing has already taken place, we are delighted to report that follow-up from the April 26 meeting has resulted in the scheduling of a detailed NRC review of the Midland test program for later this month.

E. We recognize that the SALP process is a relatively new one and that the NRC is attempting to develop an approach to the SALP reviews that will be timely, fair and based on the best available information. This second SALP Report is a major improvement over the first, National SALP Report which was issued in the fall of 1981. Nonetheless, our review of this SALP Report discloses additional improvements which can be achieved in meeting the objectives of the SALP process.

First, there appears to be no consistent format in characterizing the areas which are being evaluated. The assessment can be made by functional engineering areas such as soils, containment, piping, etc; or it can be made on the basis of discrete engineering activities such as design, procurement, construction, etc. The current SALP Report has both categorizations which leads to an inevitable double counting of deficiencies identified during a reporting period. The report itself recognizes this problem, but discounts it. We appreciate the need perceived by Region III for singling out certain specific activities, such as design control, for separate treatment in the SALP Report. However, the overlap of function and activity categories detracts substantially from the systematic nature of the appraisal. Certainly, there are mechanisms available to

Region III to express its particular concern with a designated activity other than the SALP Report.

Second, the rankings do not appear to be consistent. For example, no items of noncompliance were identified with respect to the Fire Protection, Containment and other Safety-Related Structures, and Preservice Inspection areas. Yet Fire Protection was rated a "Category 1" while Containment and other Safety-Related Structure and Preservice Inspection were rated a "Category 2."

We believe that the major criteria in evaluating licensee performance should be the number and seriousness of items of noncompliance identified by NRC for a given unit of inspection time. We are not suggesting that there is no room for subjective judgment in the appraisals of each area. What seems to occur, however, is a lack of consistency from area to area in applying the factors which shape that judgment. Moreover, we note that most of the specific items discussed were the subject of testimony before the ASLB conducting the soils hearings. Yet no review of that testimony seems to have taken place.

Finally, the time period during which the Licensee's performance is being evaluated is unclear. Part V of the Preliminary SALP Report does indicate that the noncompliances and deviations in the HVAC area were reported also in the first SALP report. However, one item of noncompliance listed in the Piping Systems and Support Performance Evaluation related to an apparent nonconformance that took place in November, 1973, but was identified during an NRC inspection during the SALP evaluation period. In addition, all of the 50.55(e) reports cited in the Preliminary SALP Report represented design deficencies which occurred long before the SALP period. If those are the groundrules for the SALP process, they should be clearly stated. The Licensee and the public will then recognize that the evaluation rests not only on events which occurred during the evaluation process, but also on events identified during the evaluation period, regardless of when they took place.

What follows is a response to specific statements in the Preliminary SALP Report. Those specific statements are either direct quotations from, or characterizations of, items which were included in various NRC inspection reports. We have responded in writing to each inspection report and refer you to those responses for the details of the Company's position regarding each item. However, some of the characterizations of the findings of the inspection reports in the Preliminary SALP Report are incomplete. For your convenience, we have summarized our responses to each of the inspection findings, as well as clarifying the content in which those findings arose, as appropriate.

Part 2 - Response to Enclosure 1, Significant SALP Report Findings

A. General Observations

1. We are pleased that the Preliminary SALP Report noted the "improvements in the overall quality assurance program"; that we have "established an effective organization for the management of QA/QC activities"; and that "the numbers and qualifications of personnel in the QA/QC organization(s)

and the overview and audit functions performed were found to be above that normally found at other construction sites."

2. Also, we are pleased that for the Support Systems (HVAC) area the Preliminary Report recognized our resolution of the problems which existed during the previous SALP period prior to July 1, 1980. This resolution was realized through considerable expenditures of resources. We believe this demonstrates our responsiveness to problems with concrete actions.

3. The general observations relative to the less technical administrative areas are of concern to us. We do not view our past responses as argumentative merely because they provide additional facts or reasoning which may not have been available for presentation to the NRC Inspector at the time of the exit interview or because they provide information with which the NRC Inspector disagrees. The Staff, in at least two instances in the soils hearing, testified that making legitimate appeals is entirely proper, and is part of the normal give and take between the NRC Staff and the licensee. It is disappointing that the Preliminary SALP Report does not embrace the essence of that testimony and also of our management conference on this subject. At that conference, we were told not to be reluctant to appeal on any legitimate issue, but to discuss our differences with Region III prior to submitting any written appeal in order to facilitate its resolution. This suggestion has been adopted.

B. Piping Systems and Supports

1. We agree with the Preliminary SALP Report item relating to the unavailability of Committed Preliminary Design Calculations (CPDCs) to support the drawings for small bore piping. This, in our opinion, was the major quality deficiency that occurred during this SALP period. Upon discovery of the unavailability of the CPDCs, we stopped the design work, began immediate corrective action, and did not resume the work until both we and the NRC Staff were assured that the process had been corrected. Even with the design process deficiency identified, it is heartening to report that not a single pipe segment required rework as a result of this situation.

2. We also note with pleasure that the informal current rating in the Piping Systems and Supports area as of this time is "Category 2" based on Mr R Cook's statements made during the April 26 presentation of the Preliminary SALP Report. This improved rating is, we assume, based upon recognition of our positive and effective corrective actions in this area.

C. Electrical Power Supply and Distribution

1. While we understand that any noncompliance is "less than desired" and also understand the Staff's particular interest in our ambitious cable pulling schedule, we do not understand the apparently negative observations in this area. The implication given is that were it not for the NRC's advice, we would have had an inadequate number of QA/QC personnel available to support the cable pulling schedule. This is an erroneous implication. We believe we have always supported the cable pulling activities with the appropriate

number of QA/QC personnel. In fact, the amount of cable pulling carried out by the Company could not have been completed without adequate QC personnel, because in process inspection is required to verify cable pulling tensions.

2. We also believe that the seven items identified during this period were not excessive and were of relatively low consequence. These items are discussed more fully in the third part of this Attachment.

D. Soils and Foundations

1. We view the finding in this area especially harsh because it is predicated on some relatively minor items of noncompliance, and on misinformation in the Preliminary SALP Report, as demonstrated in the third part of this Attachment.

2. Reference is made to "limited QA/QC coverage." At no time has the QA/QC staff been insufficient to cover the ongoing work. At one time the NRC advised us of the need for additional personnel to cover future work. We were fully aware of and agreed with that need, and we have staffed and are staffing to meet it. Also, in our opinion, there has never been any inadequacy in the qualifications of the QA/QC personnel assigned to the remedial soils work. The QA Engineers so assigned are all degreed civil engineers.

Part 3 - Response to Enclosure 2, Preliminary SALP Report

A. Section I, Introduction

Our comments on this section are found in our general comments provided in Part 1, above.

B. Section II, Criteria

1. Our general comments relating to the manner in which evaluations are made are contained in Part 1, Paragraph E, above.

C. Section III, Summary of Results

1. Our comments on this section are found in our general comments provided in Part 1, Paragraphs A and B, above.

D. Section IV.1, Performance Analysis of Quality Assurance

1. It is gratifying, as noted earlier, that the NRC recognizes our above normal efforts with regard to the Quality Assurance organization and program, with regard to our overinspections and audits, and with regard to our aggressiveness in assuming the primary inspection responsibility for the HVAC installation.

2. Seven of the eight items identified from the May, 1981, inspection and referenced in this section of the Preliminary Report are duplicated elsewhere in the report under the Soils, Piping and Supports, and Electrical

Sections. Therefore, we will address these noncompliances specifically in the other sections.

3. The eighth item from the May, 1981 inspection dealt with the correction of adverse quality trends. Action was taken to provide a procedural change to cause the more timely closeout or verification that correction has been made in response to an adverse trend.

   Our trend analysis activity is among the most comprehensive anywhere, in terms of scope and sophistication. Such an activity is not specifically required by NRC regulations or ANSI standards. Should not credit be given for this?

4. This section of the Preliminary Report also refers to another inspection

   > "indicating questionable QA managerial control (because) the licensee failed to fully evaluate the technical capability of the principal supplier of services for soil boring activities."

   This is an unfair and incorrect summary of what occurred. The original NRC Inspection Report states:

   > "The technical capabilities of Woodward-Clyde (principal supplier of services for soil boring activities) were not evaluated prior to commencement of drilling operations on April 2, 1981."

   Our original letter of response stated:

   > "On March 31, 1981, Consumers Power Company approved Woodward-Clyde consultants as the principal supplier of services for the soils boring and sample program based upon meetings (between March 3 and 11, 1981) with Woodward-Clyde consultants. . . . Woodward-Clyde consultants were considered qualified as documented by letter serial 12134, dated April 8, 1981, N Ramanujam to File B.2.5.4 (Attachment 1). Even though this letter is dated April 8, 1981, it documents steps taken prior to April 2, 1981, in qualifying Woodward-Clyde. Woodward-Clyde consultants were approved by Oral Communication Report serial 11883, R C Hirzel to R C Bauman, dated April 2, 1981, (Attachment 2). Both of these documents (Serials 12134 and 11883) were presented to Dr Ross Landsman of the Nuclear Regulatory Commission on April 9, 1981."

   This is not "questionable QA managerial control." This is not "failure to fully evaluate the technical capability of the principal supplier." The documentation was provided to the NRC Inspector.

   The actual noncompliance was failure to provide our Procurement Department with the letter documenting the approval of Woodward-Clyde prior to the commencement of activities on April 2.

5. Also, this same paragraph of the Preliminary SALP Report states:

> "The NRC identified 15 deficiencies in the principal supplier's quality assurance program manual indicating that the licensee had not adequately reviewed and approved the procedures prior to preparation of drilling activities."

We are concerned both about the substantive and procedural implications of this comment. The 15 items referred to were generated as a result of our quality assurance programmatic requirements. The NRC Inspector participated with us in the initial and timely review of Woodward & Clyde's quality assurance manual. We welcomed his participation and anticipate that it will continue, at least through the conclusion of the soils remedial work. But it is simply counterproductive and unnecessarily adversarial for the NRC Inspector to "take credit" for having identified these deficiencies. Indeed, he did not do so. In any event, the important point is these items were uncovered in a routine review, in accordance with established quality assurance practices. Had they gone undetected past the review stage, some might have risen to the level of "deficiencies." Our timely handling of these matters is inappropriately characterized as a deficiency in the Preliminary SALP Report, when in fact it represents the proper functioning of the Quality Assurance Program.

E. Section IV.2, Performance Analysis of Soils and Foundations

1. The second paragraph of this section of the Preliminary SALP Report, states:

> "Every inspection involving regional based inspectors and addressing soils settlement issues has resulted in at least one significant item of noncompliance."

The correctness of this statement depends upon how the term "inspection" is defined. It has been customary to define an inspection in terms of the duration of the inspection trip. For example, if an Inspector visits the site for three days in the first week, leaves and does not return until the third week, at which time he visits the site for two days, the practice has been to view these as two separate inspections. However, the practice of the NRC Inspector in this area has been to combine, into a single NRC Inspection Report, the results of two or more inspection trips. If an NRC inspection is defined as the inspection performed during a single trip, this statement in the Preliminary SALP Report is incorrect.

2. The Preliminary SALP Report states:

> "There was a failure to initiate audit corrective action concerning the rereview of the FSAR and references to determine if design documents had modified the FSAR and if so that changes had been made to the FSAR."

This item is duplicated in the Preliminary SALP Report in the section dealing with Design Control. Read carefully, the item reflects a failure to initiate audit corrective action, not a failure to perform an adequate

rereview of the FSAR. The need for the corrective action was, in our view, of minor importance.

The FSAR rereview was an extensive, as well as intensive effort spanning 18 months and involving three companies--Consumers Power Company, Bechtel, Babcock & Wilcox. Bechtel, alone, spent an excess of 10,000 manhours on this effort prior to its completion in September, 1980. This effort resulted in a clarification and upgrading of the content of the FSAR. Two audits were made by the Consumers Power Company Quality Assurance Department to assess the adequacy of the FSAR rereview effort. Both audit teams concurred that the rereview had been accomplished conscientiously and effectively, assuring that design changes had not modified the FSAR or, if so, that such changes had been subsequently reflected in the FSAR.

The item given in the Preliminary SALP Report stems from our audit finding to the effect that all of the design documents which were rereviewed were not listed in block 8 of the rereview form as required by the rereview procedure. The instructions for block 8 indicated that the rereviewers were to list the design documents to be rereviewed, to indicate whether or not any conflicts existed between the design documents and the FSAR, and then to indicate the necessary resolution. The audit showed that some rereviewers had listed only the design documents which contained conflicts, and had indicated the required resolutions. In essence, therefore, these rereviewers did not understand the block 8 instructions to require a complete listing of documents--those which did not contain conflicts as well as those which did.

Nevertheless, the technical correctness of the rereview was validated, as follows: Rereview packages which did not provide a complete list of the reviewed documents were identified and a large sample of them was selected. The packages selected were those which were most likely to contain design document conflicts. The packages were re-rereviewed. From this re-rereview, it was ascertained that not a single package contained even a single unresolved conflict. At this point, the rereview process was approximately 80 percent complete (recall that it was an 18 month effort). While there appeared to be some misinterpretation of the block 8 procedural requirement, all the rereviewers appeared to understand the intent of the rereview effort and were adequately resolving any conflicts between the design documents and the FSAR. Based on this, it was decided not to rewrite the procedure for block 8 and not to redo the block 8 document listings. It was thought that such actions only would have confused the process at this point in time. After an exchange of correspondence with the NRC on this item, however, we agreed to change the procedure and to provide additional training to the reviewers.

At the completion of the FSAR rereview effort, another sample of packages was re-rereviewed by the audit team with the same results, thus verifying the adequacy of the remaining 20 percent of the effort which had not been subject to the initial audit re-rereview. In essence, then, the two audit re-rereviews confirmed the adequacy of the entire effort.

In testimony before the Soils Hearing Board, Dr Landsman indicated that the block 8 condition did not call into question the technical effectiveness of the rereview, which Dr Landsman specifically found adequate (TR.p-4857, 4930).

3. The Preliminary SALP Report notes:

> "Three examples of failure to translate applicable regulatory requirements and design criteria into design documents."

This item is also duplicated in the Design Control section of the Preliminary SALP Report.

a. The first example given is:

> "Failure to maintain a coordination log of Specification Change Notices (SCNs)."

In response, there are three separate coordination logs in the civil discipline. These logs are maintained by three different people. The Drafting Supervisor maintains the coordination log for drawings and drawing change notices. The remaining documents, including SCNs, are covered by two other coordination logs which are maintained by Discipline Aides.

During the Region III inspection, the Company could not immediately document that all coordination had been included on an SCN log. The problem was made worse by the fact that the NRC Inspector was inadvertently shown the wrong log. Also the NRC Inspector felt that applicable procedures required all revisions of specifications, whether technical or clerical in nature, including those merely incorporating previously approved or coordinated SCNs, be reviewed by Geotech and so noted in the log. Although the Company disagreed with this interpretation, the procedure was modified, making it clear that clerical revisions merely incorporating previously reviewed changes need not be re-coordinated or re-reviewed by Geotech. At the request of the Region III Inspector, the Company also committed to review current revisions of civil, Q specifications to insure appropriate coordination of changes was carried out.

In any event, this is hardly something which can be properly characterized as a "failure to translate applicable regulatory requirements and design criteria into design documents."

b. The second example given is:

> "Failure to correctly translate Specification Change Notice No SCN-9004 as a requirement into Revision 20 of Specification C-208."

This item arose as a result of a slight difference in wording between an SCN and the specification, after incorporation of the SCN into the

specification, relative to the Geotechnical Engineer's responsibilities for establishing the laboratory compaction test frequency. The SCN was issued to describe the responsibilities of the newly assigned on-site Geotechnical Engineer. The specification after incorporation of the SCN, used terms different from and more general than the SCN to describe the geotechnical engineer's responsibility for the establishment of the frequency for laboratory compaction testing. In our view, the intent of both the SCN and the specification was the same, although the NRC Inspector did not agree. Subsequently, any difference in wording was eliminated. Again, this situation appears to be very harshly characterized as a "failure to translate applicable regulatory requirements and design criteria into design documents."

c. The third example given in the Preliminary SALP Report is:

> "Failure of Engineering Department Project Instruction No EDPI 4.25.1, Revision 8 to establish adequate measures for design interface [illegible]irements."

In response, the EDPI was revised to state that it is the responsibility of the originator of a design change to coordinate the change with all groups which are affected by, or involved with, the revised portion of the document, regardless of whether the change is technical or editorial. This procedural change was made to eliminate the previous option of the Group Supervisor to waive the need for the coordination or interface when, in his judgment, it was unnecessary. This coordination is now required even for editorial changes. Adequate coordination had been accomplished prior to the EDPI revision.

The need for this added conservatism introduced by the EDPI revision is a matter of opinion and Consumers Power Company has accommodated the NRC's concern in this regard. However, there was never any "failure to translate applicable regulatory requirements and design criteria into design documents" and to characterize this item in that way is erroneous and unfair.

4. The Preliminary SALP Report gives the following item:

> "Failure to establish test procedures for soils work activities."

The NRC Inspector found that US Testing did not previously determine the rheostat setting which produced the maximum density. However, US Testing did previously determine the rheostat setting that produced the maximum amplitude required by ASTM D2049. Tests were reperformed to verify that the maximum rheostat setting yields the maximum amplitude given in the relative density table used for the project. Results were documented and supplied to the NRC. This is far different from a "failure to establish test procedures" as stated in the Preliminary SALP Report. Again, the Report's comments are a gross generalization and a misrepresentation of the factual situation.

In this situation, the NRC Inspector did not accept an ASTM Standard procedure called out in the specification and imposed his own personal preferance as to the technical requirement.

5. The Preliminary SALP Report also indicates a:

> "Failure to supply a qualified on-site Geotechnical Engineer."

As part of the original response to soils issues, a Geotechnical Engineer was assigned to be on site. The resumes of the assigned engineer ("the first engineer") and of another applicant to the position ("the second engineer") were reviewed by Mr E Gallagher, then the cognizant NRC Inspector. Mr Gallagher expressed his opinion to our Mr Horn that the second engineer was preferable because of his many years of field experience. We cannot say whether or not Mr Gallagher noticed that the second engineer was not a degreed engineer (although Mr Gallagher reviewed the man's resume). On the basis of Mr Gallagher's opinion, the first engineer was removed and the second engineer was assigned to the site. Subsequently, another NRC Inspector, Dr Landsman, became cognizant in this area. Dr Landsman who was accompanied by Mr Gallagher during this inspection, was advised of the original coordination with Mr Gallagher, but Dr Landsman held an opinion different from Mr Gallagher because the second engineer did not have a civil engineering degree. Dr Landsman then cited the Company with a deviation for failure to provide a qualified Geotechnical engineer for the job. Immediately thereafter, the first engineer was reassigned to the on-site position. Dr Landsman concurred with this assignment. In view of these facts, the citation seems to us unfair.

6. The Preliminary Report also states:

> "It was noted in NRC Inspection Reports No. 50-329/81-12; 50-330/81-12 that a sufficient number of qualified personnel were not available for the complex nature of the remedial soils work. This had previously been identified in NRC Inspection Reports No. 50-329/81-01; 50-330/81-01, referenced previously as a deviation to a commitment."

Inspection Reports No. 50-329/81-01; 50-330/81-01 deal with the deviation relative to the on-site Geotechnical Engineer. This was covered in Paragraph 5, immediately above. By the placement of this item in two different parts of the Preliminary Report, the appearance is given of two different items when, in fact, there is only one.

NRC Inspection Reports No. 50-329/81-12; 50-330/81-12 merely indicated the NRC's advice to the effect that additional QA/QC personnel would be needed to accommodate the forthcoming remedial soils work. We agreed with this NRC observation. We were not cited for any noncompliance on that score in these inspection reports. We now have 8 full time and 2 part time QA/QC persons employed in MPQAD and 27 QA/QC persons employed by both MPQAD and Bechtel Quality Control to cover remedial soils work--appropriate for the current workload, also taking into account the time necessary to assure their adequate training and certification. Five more persons are due on site by

mid May. Additional personnel are being sought to fill the 2 remaining authorized positions. The Preliminary SALP Report gives the impression of an inadequacy with regard to the quantity of personnel when, in fact, quite the opposite situation exists.

7. Finally, another item referenced in this section of the Report is duplicated in the Quality Assurance Section of the Report. Please refer to Part 3, Paragraph D.4, above.

8. In summary, while we find this section of the Preliminary Report inaccurate and overstated, we fully recognize the special sensitivities involved in the remedials soils area, and we are especially dedicated to the implementation of the quality controls and assurances required by law and engineering prudence.

F. Section IV.3, Performance Analysis of Containment and Other Safety-Related Structures

1. The cracks in the BWST foundation are also referred to in the section of the Preliminary SALP Report dealing with Design Control.

G. Section IV.4, Performance Analysis of Piping Systems and Supports

1. Item a(1) of this section of the Preliminary SALP Report states that:

> "Bechtel Purchase Order did not specify applicable codes for purchase of 60,000 pounds of E-7018 electrode."

The original statement of the item, from NRC Inspection Reports No. 329/80-20-01 & 330/80-21-01 was as follows:

> "Bechtel Corporation Welding Standard WFMC-1, Revision 8, dated January 4, 1971, 'Welding Filler Material Control Procedure Specification,' Paragraph 2.1, states, in part, that'. . . welding filler material ordering information shall include the appropriate requirements of the job engineering specification, the applicable Code and this procedure specification. . . .'
>
> 'Contrary to the above, on July 10, 1980, the (NRC) Inspector established (that) Bechtel Purchase Order No. 7220-F-5780, dated November 2, 1973, for 60,000 pounds of E-7018 electrodes did not specify the applicable Code.'"

First, note that the Preliminary SALP Report statement omits any reference to the November 2, 1973, date. The Bechtel Purchase Order for the E-7018 electrode was issued on November 2, 1973. We question whether we should be cited in this assessment period for an event which occurred 7 years prior to the assessment period.

Second, at the time of the procurement, a revision of WFMC-1, dated May, 1973, was applicable, whereas the citation referenced the January 4, 1971

revision of WFMC-1. The procurement was made in accordance with the May, 1973 specification. The procurement documentation reflected complete compliance with the requirements. Although these facts were not available immediately during the period of July 8-10, 1980, when the NRC Inspector was making the inspection, these facts were provided in our original response to the citation on August 25, 1980.

In addition, Consumers Power Company has performed an audit of the procurement documentation for weld filler materials procured from 1973 through 1980. This, too, was reported to the NRC in the August 25, 1980 response.

2. Item a(2) in this section of the Preliminary Report indicates that an Authorized Nuclear Inspector's hold point was bypassed for the pressurizer surge piping.

   This item was detected by the NRC Inspector on September 24, 1980. By September 25, corrective action had been taken and verified by the NRC Inspector.

3. Items a(3) and (4) indicate that large bore pipe restraints, supports and anchors were installed incorrectly and that QC Inspectors did not detect the incorrect installations.

   It is highly unusual to cite a licensee twice for what is essentially a single QA defect (one citation for the construction defect and another for not having detected the defect).

   The NRC Inspector found 7 cases of apparent nonconformances to design requirements. He stated that he was using cursory inspection techniques. Upon our further inspection, we agreed that 3 of the cases were defects, but with more refined inspection techniques our investigation indicated that 2 cases were within tolerance, 1 case was a result of obvious post-inspection damage that would be checked for during walkdown inspection, and 1 case was for work yet to be inspected initially. The 3 real defects were of a relatively minor nature, and none of them impaired the function of the hangers even though they constitute a legitimate basis for the NRC's finding.

   On the basis of these findings, we agreed to make an extensive sampling reinspection of hanger installations which were made prior to 1981. The results of this reinspection have indicated the presence of additional minor defects and may necessitate further reinjection. The results have been made available to the NRC and now are being analyzed by both the NRC and Consumers Power Company.

4. Item a(5) in this section of the Preliminary Report, dealing with the availability of Committed Preliminary Design Calculations for small bore pipe and piping suspension systems, is duplicated in another section of the draft SALP Report dealing with Design Control and Design Changes and is the major contributor to the Significant SALP Report Findings for Piping Systems

and Supports given in Enclosure 1 to the Reference. Correspondingly, our response to this item is covered in Part 2, Paragraph B of this attachment.

5. Item a(6) indicates:

> "Failure to adequately control documents used in site small bore piping design activities."

The original item from NRC Inspection Report No 50-329/81-12 and 50-330/81-12 stated that:

> "An (one) outdated specification was maintained at the small bore piping design group work location and revised calculations were not marked 'superseded' in accordance with the procedural requirements (our emphasis)."

After careful checking, this finding was determined to have been an isolated case.

Nevertheless, the calculations were checked and were found to be correct. Training was conducted of all personnel in this group. An audit was made. A procedure was changed to require that the specific revision number of the specification on which the calculation is based be documented in the calculation package.

6. Item a(7) indicates that Consumers Power Company audits did not:

> "Include a detailed review of system stress analysis and (did not) follow up on previously identified hanger calculation inconsistencies."

In response, the above statement refers to the fact that we did not audit for the availability and correctness of the Committed Preliminary Design Calculations as discussed in Part 2, Paragraph B, and Part 3, Paragraph G.4, above. The audits that were made previously in this area concentrated on the completed calculations, rather than the preliminary calculations. The audit checklist for this area has since been adjusted to reflect a requirement relative to the preliminary calculations.

H. Section IV.5, Performance Analysis of Safety-Related Components

1. As a result of the two original items, from which the two items in this section of the Preliminary SALP Report are drawn, Consumers Power Company issued a formal Stop Work Order to Babcock & Wilcox and a letter to the NRC stating that the work stoppage would remain in effect until the corrective actions had been completed and reviewed by the NRC. Corrective actions were taken, as follows: The installation procedure for this activity was revised to clarify the method of installation and to specify the required dimensional checks. The indoctrination and training of the personnel performing the installation and of the personnel inspecting the work was strengthened. The Consumers Power Company overview inspection plan for this activity was revised. The NRC Resident Inspector verified these actions.

2. Again, it is encouraging that today's rating in this area, as stated by Mr R Cook during the April 26 meeting, is a strong "Category 2," or even, perhaps, a "Category 1," based on the aggressiveness of our overview efforts. We recognize the particular importance of this area, and we intend to continue our agressive overview of this area.

I. Section IV.6, Performance Analysis of Support Systems (HVAC)

1. We appreciate the "Category 1" rating for the period in question and on an informal basis for the current period, as well, as stated by Mr R Cook during the April 26 meeting.

2. It should be noted that the civil penalty was imposed for conditions which existed prior to the assessment period in question.

3. The 17 items referred to were all identified as a result of investigations which were completed prior to June 30, 1980, and, therefore, prior to the start of the assessment period in question. This may be observed by review of the individual items given in NRC Inspection Reports No. 50-329/80-10; 50-330/80-11. Although these Inspection Reports are dated January 12, 1981, they clearly provide findings that were available prior to June 30, 1980. During management meetings held on March 24 and 28, 1980, these investigation findings were discussed extensively.

J. Section IV.7, Performance Analysis of Electrical Power Supply and Distribution

1. Item a(1) in this section of the Preliminary SALP Report indicates a failure to establish procedures for temporary support of cable.

   The four damaged cables were repaired. The procedure was revised to require that coiled cables be properly supported, protected from damage and prevented from violating the minimum bend radius.

2. Item a(2) in this section of the Report indicates that electrical contractors did not verify conformance to Paragraph 3.1 of Project Quality Control Instruction E-5.0.

This item was an isolated incident of two wires violating separation standards inside a control panel. The cable routing was rearranged to provide the required separation, and the separation was verified by inspection. Electrical crafts and inspection personnel were formally reinstructed with regard to the separation requirements. Installation and inspection aids were provided to these personnel.

3. Item a(3) indicates a:

> "Failure to identify and control nonconforming components."

Because of the general nature of this item, we are not sure to what it refers. After a thorough review of the NRC Inspection Reports for this assessment period, however, we believe that it refers to an item from NRC Inspection Reports No. 50-329/81-11; 50-330/81-11, as follows:

> "On April 23, 1981, the (NRC) Inspectors identified 14 instances in which cable tray in the upper and lower cable spreading areas were not installed in accordance with the separation requirements delineated in the Midland FSAR and which had not been identified and controlled to prevent inadvertent use or installation. . . ."

Consumers Power Company documented the nonconforming condition for a few cases on a Nonconformance Report issued in May, 1979, long before the NRC Inspectors' finding. Late in 1979, it was determined that the existing Marinite barriers were not the most suitable separation device for our plant configuration. This resulted, in January, 1980, in the removal of the requirement for the Marinite barriers. In the spring of 1980, a study was conducted to determine which kind of barriers would be more suitable when the required spatial separation is not possible. Two things resulted from this study--first, that barrier installation would be accomplished best after cable pulling was complete; and second, that there was no risk in reworking cable trays after cable pulling to install the barriers, if needed. In August, 1980, a new barrier was chosen and SAR and design changes were made in April and June, 1981, respectively to reflect these changes.

This is a lengthy discourse, we realize, but in essence, the main points are as follows: we were well aware of the condition. At the time, we made a conscious decision not to provide any more inspection to identify additional specific cases where separation was not maintained. We were aware that the design was being changed, that the construction process was being changed, and that the final Bechtel Quality Control inspection for this condition would be carried out at the conclusion of the construction process. The Bechtel Project Quality Control Instruction E-3.0, "Final Electrical Area Completion Activities," was revised to reflect the inspection for separation and, as needed, for the installation of barriers at the completion of the cable pulling activities. Correspondingly, we were holding open our Nonconformance Report to assure that these changes were correctly implemented. There was no inadvertent "failure to identify and control." It was a conscious and knowledgeable decision.

This information was provided to the NRC on July 16, 1981, in our response to the NRC Inspection Report. Considering the explanation supplied to the Staff, we believe that there was no item of noncompliance and that this item should not have been in this Preliminary SALP Report.

4. Item a(4) indicates a:

> "Failure to translate design criteria into drawings and specifications."

This inspection finding related to whether or not the color coding of instrumentation process lines was required. Based on our reading of the applicable codes and standards, it was not, and we stated this position in our original response to the NRC. At least one other licensee has the same position and is maintaining it. However, we have acceded to the NRC concern in this area by agreeing to identify the instrument process lines with a two digit alpha designator, and the specification has been changed to add this new requirement. We are also not clear whether this requirement applies generally or only in Region III, since the Draft Regulatory Guide on this subject makes no mention of the requirement.

5. Item a(5) indicates a:

> "Failure to identify during inspection that a nonconforming condition with regard to minimum installed cable bend radius existed."

The condition referred to was discovered by a Consumers Power Company employee who was accompanying the NRC Inspector during his inspection. A Consumers Power Company Nonconformance Report was written to document the condition for the single cable in question. In addition to physically correcting the condition, the Bechtel Quality Control Inspector who originally inspected the cable was given an 8-hour training program on all phases of cable termination.

6. Item a(6) indicates:

> "Failure to take prompt corrective action with regard to the lack of approval of procedures for the rework of electrical raceways."

We agreed that this was an entirely appropriate finding and Bechtel Construction and Bechtel Quality Control developed and issued the necessary administrative guidelines and instructions. Recently NRC Inspectors have conducted a follow-up inspection and determined that the rework controls have been properly implemented and carried out.

7. Item a(7) indicates:

> "Failure to provide adequate storage conditions for (three items)."

The storage conditions for each of the items was immediately corrected. The Bechtel Maintenance Engineers were given additional training in accordance with the requirements of the field maintenance procedure. Consumers Power Company performed a comprehensive audit in this area to assure compliance with the field maintenance procedure.

8. It should be noted that each of the foregoing items is a Severity Level V or VI, relatively low severity levels.

   We are gratified that our informal current rating is "Category 2," as stated by Mr R Cook during the April 26 meeting.

9. In two places in this section of the Preliminary SALP Report reference is made to the quantity of Bechtel Quality Control personnel being employed, with the implication that this quantity may be insufficient. To our knowledge it was not; nor is it now. In addition, in response to NRC concerns we have demonstrated both the qualifications of these personnel and the process by which they are certified.

K. Section IV.8, Performance Analysis of Instrumentation and Control Systems

No comment.

L. Section IV.9, Performance Analysis of Licensing Activities

Comments pretaining to our responsiveness to Staff requests for information regarding the "Soils" issue should certainly be qualified by noting the novelty or uniqueness of this technical review and the evolutionary nature of the Staff's positions. It is useful to note that as this review draws to its conclusion, the Advisory Committee on Reactor Safeguards (ACRS) subcommittee on the Midland soils questions characterized the Staff review as exhaustive and possibly an example of overkill. In addition, the ACRS subcommittee questioned the Staff extensively on whether portions of their review and requirements went beyond what was necessary to protect public health and safety. We are gratified that the Staff finds our more recent replies to be responsive and of high quality. We are striving to maintain this trend and improve communications with the Staff.

M. Section IV.10, Performance Analysis of Fire Protection

We appreciate NRC's "Category 1" rating in this area and its recognition of our efforts.

N. Section IV.11, Performance Analysis of Preservice Inspection

In view of the extensive amount of preservice inspection which was performed during the period corresponding to this SALP Report and continuing into the current period, with no items of noncompliance, we fail to understand why this area is not rated as "Category 1" instead of "Category 2,".

O. Section IV.12, Performance Analysis of Design Control and Design Changes

1. Items a(1)(a) and (b) given in this section of the Preliminary SALP Report are duplicates of items given in Section IV.2. As such, our specific response to these items is given in Part 3, Paragraphs E. 2 and 3, and will not be repeated here.

2. Item a(2) in this section of the Report is a duplicate of an item covered in Section IV.4. As such, our specific response is provided in Part 3, Paragraph G.4 and will not be repeated here.

3. Item a(3) in this section of the Report is a duplicate of an item given in Section IV.7 of the Report. As such, our specific response is given in Part 3, Paragraph J.4 and will not be repeated here.

4. The five 10CFR50.55(e) items listed in this section of the Preliminary Report relate to designs which were completed long before the start of the SALP period in question--in fact, years before. Our identification of these items during this assessment period indicates continuing design reviews, improved design control and our rigid compliance with the reporting requirements of 10CFR50.55(e).

5. We also call your attention to five inspections of Bechtel Power Corporation, Ann Arbor Division, engineering firm for the Midland Plant, conducted between January, 1979 and September, 1981 by the Vendor Inspection Branch of Region IV. The inspection covered a wide variety of design activities. For example, the October 7-10, 1980 inspection encompassed design verification, design interface, and design inspection activities. The March 31-April 3, 1981 inspection covered computer program control, technical personnel background verification, design change control and design corrective action. The two specifically referenced inspections were conducted during the SALP appraisal period. In all five inspections, there were a total of 6 nonconforming items identified, all of a relatively minor nature (nonconformances or deviations rather than violations). In two of the inspections no items of noncompliance were found. In our view, these inspections are indicative of a high degree of compliance within design segments of the Midland Project, and would clearly support a higher rating than the one given in this area.

   (The five inspection reports are documented in letters dated April 16, 1981; October 14, 1981; November 5, 1980; June 15, 1979; and January 19, 1979, to the Bechtel Power Corporation, Ann Arbor Division, from Uldis Potapors, Chief Vendor Inspection Branch.)

6. Considering the nature of Items a(1)(a) and (b) and a(3), and the unfairness of a citation for activities long before the period in question, we are disappointed by a "Category 3" rating in this area.

   We believe that design control is one of the most difficult and important aspects of nuclear power plant projects. Design control has been doubly difficult for the Midland Project mainly because of the duration of the project and the incorporation of a multitude of new regulatory requirements

into the design as it progressed. We do not dismiss for a moment our obligation to monitor and improve our own efforts in this area and we continue to institute our own internal programs to increase our confidence in the quality of the overall design effort. We raise this concern with the preliminary SALP evaluation because the only significant finding in the SALP period that indicates a design control problem was the small bore piping lack of design package cover sheet, which was concluded to be an isolated event. On the other hand, we believe that the Region IV inspection reports and the seven 50.55(e) reports referenced provide strong indications that the design control area is improving.

P. Section IV.13, Performance Appraisal of Reporting Requirements and Corrective Action

1. In this section of the Report, it is stated that:

> "The licensee failed to make a timely determination for the need to submit a 10CFR50.55(e) Report to the NRC based on a 10CFR Part 21 Report from TransAmerica DeLaval, Inc."

Consumers Power Company has always adopted a conservative attitude towards reporting under 10 CFR 50.55(e). We believe the industry practice in this regard varies, depending upon the amount of analysis undertaken and discretion exercised in determining whether a deficiency could have an adverse impact on safety. In the past, Region III has stated that the Company does a "good job" reporting under 10 CFR 50.55(e).

In this specific case, the DeLaval Part 21 Report was sent to Bechtel and was misrouted, such that Consumers Power Company and the appropriate Bechtel personnel were not aware of the Part 21 Report on a timely basis. In the final analysis, the condition was determined not to be 50.55(e) reportable.

Corrective actions were taken. They included issuing letters to suppliers to advise them of the person to whom Part 21 Reports should be submitted, conducting training sessions at the site for key personnel to assure that misdirected Part 21 Reports get correctly redirected, and issuing periodic memos reiterating the information offered in the training session.

2. This section of the Preliminary SALP Report also states:

> "Expeditious resolution of noncompliances is often delayed by inadequate licensee responses. The licensee has a tendency to spend too much time trying to justify why a finding is not a noncompliance rather than devoting the time to correcting the basic problem. Nine of 22 items of noncompliance were contested (excluding HVAC system noncompliances). Two of the contested noncompliances were retracted, but time and effort were lost in timely resolutions. Similar attitudes and responses have been observed regarding Company audit findings. This attitude is reflective of the licensee corrective action system and becomes a detriment to quality."

In response, let's deal with the statistics first. Two of the nine appeals (excluding HVAC) were granted, or 22 percent. Five other HVAC items were appealed, and two of those appeals were granted, or 40 percent. Combined, 14 items were appealed, 4 appeals were granted, or 29 percent. Of those not granted, the merits of the appeal are well documented.

While there may be some unavoidable delay because of appeals, in no instance has an appeal precluded timely corrective action. In addition, the Staff has repeatedly testified in the Soils Hearing that the Applicant should appeal when necessary or appropriate.

During a meeting on October 5, 1981, NRC's Region III management made it clear that NRC's concern was with the administrative process by which appeals were made, not with the appeals themselves. They stated that appeals should be made and dispositioned informally, if possible, prior to the issuance of NRC Inspection Reports or, at the latest, prior to our written response to the NRC findings. We agreed with this suggestion and assured the NRC that such appeals, if any, would be made accordingly. It is disappointing that the substance of this management discussion was not reported in the Preliminary SALP Report.

Q. Section V.A, Noncompliance Data

1. It is important to recognize that the noncompliances and deviations given in the table for Midland Unit 1 are identical to those given in the table for Midland Unit 2 in the large majority of cases. We recognize that this is so stated in the footnote to both tables in the Report.

2. At this point, it is appropriate to reiterate from our response given in Part 3, Paragraph I.3, that the 17 items associated with the HVAC were all identified as a result of investigations which were completed prior to June 30, 1980 and, therefore, prior to the start of the assessment period in question. This can be seen by review of the individual items given in NRC Inspection Reports No. 50-329/80-10; 50-330/80-11. Although these Inspection Reports are dated January 12, 1981, they clearly provide findings that were available prior to June 30, 1980. During management meetings held on March 24 and 28, 1980, these investigation findings were extensively discussed. In conversations with NRC Inspectors, we were advised that these items are included in this SALP Report because they were inadvertently excluded from the earlier Report, and that they have to be covered somewhere. We believe that the earlier SALP Report should be revised to reflect these items. The presence of these items in this SALP Report bears unfavorably and unfairly upon the overall impression offered by the Report for the period in question.

R. Section V.B, Licensee Report Date

1. The twelve 50.55(e) Reports listed herein further demonstrate our cooperative approach with regard to the submittal of 50.55(e) Reports, as stated earlier in our response given in Part 3, Paragraph O. 4 and 5.

S. Section V.C, Licensee Activities

No comment.

T. Section V.D, Inspection Activities

1. The results of the May 18-22, 1981, NRC team inspection evoked the following conclusion, as given in NRC Inspection Reports No. 50-329/81-12; 50-330/81-12:

> "This was an in-depth inspection to examine the implementation status and effectiveness of the current QA Program, to determine whether previously identified quality assurance problems were sufficiently precluded from occurrence in other areas, and to ascertain whether management involvement in the QA Program was sufficient and effective.
>
> Although eight items of noncompliance were identified during this inspection, it is our (NRC) judgment that the scope and depth of this NRC inspection was such that the identified noncompliances do not contravene our conclusion that Consumers Power Company has established an effective organization for the management of construction and implementation of quality assurance at the site."

U. Section V.E, Investigations and Allegations Review

No investigations or allegations were pursued during the assessment period corresponding to this SALP Report, including investigations and allegations for HVAC. This supports our earlier assertions that reference to the 17 HVAC items should be deleted entirely from this Report.

V. Section V.F, Escalated Enforcement Actions

1. The civil penalty was imposed for conditions which existed prior to the assessment period corresponding to this SALP Report.

2. Under the heading of "Confirmatory Action Letter" are two examples of inspection findings that appear to be characterized in an overly harsh manner. We have been told in prior conversations that letters of committment by the licensee with regard to inspection findings and which commit to actions desired by the NRC do not constitute an escalated enforcement action. Obviously, we misunderstood. Not only are these letters categorized under the escalated enforcement heading, but the text directly states that these were in fact the licensee equivalent of an immediate action letter. It was our understanding that Region III agreement to a licensee letter of commitment represented a Region III management decision that the item in question was downgraded in severity and did not represent an escalated enforcement action.

W. Section V.G, Management Conferences

1. Two of these management conferences were at Consumers Power Company's request.

2. We strongly support the need for more management conferences with top and intermediate level NRC management participation, especially focused on attaining mutual understanding as to the standards that will be applicable to Midland inspections.

COMPARISON OF TESTIMONY OF JAMES G KEPPLER BEFORE THE ASLB ON JULY 13-14, 1981 WITH FINDINGS IN THE DRAFT SALP REPORT

Introduction

On July 13-14, 1981, Mr James G Keppler, the Director of the Region III Office of Inspection and Enforcement, testified that the NRC has reasonable assurance that quality assurance and quality control programs at Midland will be appropriately implemented with respect to future soils construction activity, including remedial actions. In March 1982, Region III issued its Preliminary SALP Report on the Midland Plant. Nothing in the SALP Report contravenes Mr Keppler's testimony regarding reasonable assurance. All of the information contained in the SALP Report was known to Mr Keppler at the time he testified.

1. Quality Assurance

   a. SALP Analysis

   The report notes the creation of the MPQAD and Consumers Power's assumption of responsibility for onsite quality control and quality assurance functions for the installation of the HVAC systems. It also lists the findings of NRC Inspection Report No 81-12. The report concludes:

   > The licensee is rated Category 2 in his overall quality assurance capability. Notwithstanding weaknesses identified in specific areas, the licensee has been responsive in establishing an overall effective organization for the management of construction and implementation of quality assurance at the site.

   b. Prior Testimony

   Mr Keppler testified extensively regarding NRC Inspection No 81-12,[1] the MPQAD[2] and the Zack matters.[3] Mr Keppler initiated NRC Inspection No 81-12 for the purpose of determining the efficacy of the MPQAD.[4] Mr Keppler personally inspected the work of the NRC inspectors at the conclusion of the inspection,[5] participated in drafting the inspection report, and signed the final report.[6] Mr Keppler concurred in the report's conclusion that, although some problems were identified, the MPQAD and the quality assurance program at Midland were working quite well.[7] Mr Keppler also described the corrective actions Consumers Power had taken with regard to Zack, and concluded that the Zack problem did not indicate a broader breakdown in quality assurance.[8]

2. Soils and Foundations

a. SALP Analysis

The SALP Reports lists the soils-related noncompliances and deviations identified in NRC inspections of Midland during the SALP evaluation period (July 1, 1980 to June 30, 1981). The report concludes that:

> The licensee is rated Category 3 in this area. The enforcement history indicates that additional licensee attention is warranted.

b. Prior Testimony

The evidence before the Licensing Board shows that Mr Keppler was thoroughly familiar with the 1980-81 enforcement history relating to soils issues when he made his judgment regarding reasonable assurance at Midland. Mr Keppler was Regional Director of Region III during this period and signed all of the NRC inspection reports listed in the SALP analysis.[9] He testified in detail about many of the soils problems identifed in these reports.[10] He explained that all of the soils problems identified in 1980-81 were carefully reviewed and reassessed, and all pertinent records covering summer 1980, to May 1981 were examined, in arriving at the conclusion of reasonable assurance in May 1981.[11] Mr Keppler specifically noted that the history of soils work at Midland did not contravene his judgment of reasonable assurance. The soils problems, he testified, "can be largely attributed to the failure to fully recognize the importance of the application of quality assurance to soils work (but) the importance of quality assurance to soils work and to consequent remedial actions at the Midland site is now fully recognized" by Consumers Power.[12]

3. Containment and Other Safety-Related Structures

a. SALP Analysis

"The licensee is rated Category 2 in this area. The licensee's performance appears to be satisfactory; no significant strength nor weaknesses were identified."

b. Prior Testimony

Mr Keppler did not testify on this subject.

4. Piping Systems and Supports

a. SALP Analysis

The Report lists seven items of noncompliance identified by NRC Staff inspections during the evaluation period. Based on five of these

items, an Immediate Action Letter (IAL) was issued on May 22, 1981. The report concludes:

> The licensee is rated Category 3 in this area. The enforcement history is indicative of weaknesses in the implementation of the quality assurance program.

b. Prior Testimony

Mr Keppler testified regarding the piping problems identified during NRC Inspection No 81-12 in May 1981.[13] He explained that problems with piping systems are an industry-wide concern that is receiving considerable Region III attention.[14] Problems are being identified in this area at almost every nuclear site inspected.[15] The NRC Staff inspector who identified the piping problems at Midland is at the forefront of knowledge in this area, and did not consider the incidents at Midland to be significant.[16] NRC Inspection No 81-12 confirmed that the methodology of the design, installation and quality control inspection of the piping and support system was acceptable.[17] It was the unanimous view of the inspection team that the problems identified were isolated, and not indicative of any major programmatic weaknesses in the implementation of the program.[18]

5. Safety-Related Components

a. SALP Analysis

The report lists the two items of noncompliance which culminated in Consumers Power's issuance of a letter of understanding on January 22, 1981. The report concludes:

> The licensee is rated Category 2 in this area. The above enforcement was aimed at an isolated instance and may have been directly related to change in NSSS QC personnel changes. The licensee had in the past and since this episode maintained adequate QA control for the assembly of NSSS equipment.

b. Prior Testimony

No testimony was given on this subject.

6. Support Systems

a. SALP Analysis

The report notes the quality assurance deficiencies and the Civil Penalty of the previous SALP evaluation period. It commends Consumers Power's "aggressive action" in taking over complete responsibility for quality assurance and quality control in HVAC installations; this action resulted in significant improvement in control over the installations and in correction of identified weaknesses. The report concludes:

The licensee is rated Category 1 in this area. Management attention and involvement has been aggressive in accepting full QA/QC responsibility and supporting this organization with an adequate number of skilled personnel.

b. Prior Testimony

Mr Keppler testified that the HVAC problems problem did not indicate a broad breakdown in quality assurance.[19]

7. Electrical Power Supply and Distribution

a. SALP Analysis

The report listed seven noncompliances identified during the evaluation period and concluded:

> The Licensee is rated Category 3 in this area. The enforcement history indicates a lack of management attention and involvement. This is evident by apparent inadequate preplanning and assignment of priorities as activities increased, a poor understanding of procedures for control of activities and minimal QC Staffing for the magnitude of the activities.

b. Prior Testimony

Mr Keppler testified that electrical work was extensively reviewed during the May 1981 NRC Staff inspection of Midland.[20] The inspection team reviewed five areas within electrical work: quality assurance records, quality assurance implementing procedures, quality control personnel, visual inspection of electrical work activities, and Consumers Power's actions on previously identified items.[21] Only four problems were identified.[22] These problems were isolated and not indicative of any major programmatic weaknesses in the implementation of the program.[23] The inspection report also commended Consumers Power for several aspects of their electrical work program. First, the program and its implementation regarding calibration of termination tools was judged to be satisfactory.[24] Second, Consumers Power had taken timely and comprehensive actions to correct areas addressed on previous NRC inspections.[25] Finally, the quality assurance (electrical) organization was found to be strong and capable.[26]

8. Instrumentation and Control Systems

a. SALP Analysis

"The Licensee is not rated in this area because a minimal amount of instrumentation installation and minimal inspection effort during this evaluation period."

b. Prior Testimony

There was no testimony on this subject.

9. Licensing Activities

a. SALP Analysis

"The Licensee is rated Category 2 in this area. Early responses during the evaluation period were lacking in responsiveness. However, the more recent responses tend to be substantive and of acceptable quality."

b. Prior Testimony

Mr Keppler did not testify on this subject

10. Fire Protection

a. SALP Analysis

"The Licensee is rated Category 1 in this area. Management attention has resulted in a high level of performance in this area."

b. Prior Testimony

There was no testimony on this subject.

11. Preservice Inspection

a. SALP Analysis

The Licensee is rated Category 2 in this area. The Licensee's performance appears satisfactory, no specific strengths nor weaknesses were identified."

b. Prior Testimony

There was no testimony on this subject.

12. Design Control and Design Changes

a. SALP Analysis

The report notes four design control related noncompliances identified by NRC inspections and five licensee-controllable Construction Deficiency Reports indicating a lack of quality assurance in design control during the evaluation period. The report concludes:

> The licensee is rated Category 3 in this area. The amount of re-engineering that has transpired in electrical, civil and piping areas and the specific design control weaknesses discussed in

Soils and Foundations, Piping Systems and Supports and Electrical Power Supply and Distribution indicate significant weaknesses in overall design control.

b. Prior Testimony

Mr Keppler did not consider the problems identified in the piping system to be a significant concern.[27] He also testified that noncompliances identified by NRC inspections in the soils area, although of concern, did not contravene his judgment of reasonable assurance.[28] Another NRC Staff witness, Mr Gilray, confirmed that the two soils noncompliances referenced here by the SALP Report were not substantive and did not bring the adequacy of Consumers Powers procedures into question.[29] The May 1981 NRC inspection affirmed the adequacy of the electrical program at Midland.[30] Mr Keppler did not identify design control as a significant quality related problem.[31]

13. Reporting Requirements and Corrective Action

a. SALP Analysis

The report notes that Consumers Power contested several apparent items of noncompliance during the evaluation period, and concludes:

> The Licensee is rated Category 3 in this area. The licensee responses to enforcement items and internal audit findings are often delayed requiring repeated submittal to obtain acceptable resolutions.

b. Prior Testimony

Mr Keppler testified that Consumers Power had responded to all items of noncompliance identified in NRC inspection reports. He noted that Consumers Power agrees with some such items and disagrees with others. Mr Keppler stated that the fact that Consumers Power does not agree with an apparent item of noncompliance is not a sign of poor management attitude. If there is a valid reason to disagree with the item, he added, then they should disagree with it. This is a normal part of the give and take between the NRC Staff and the licensee.[32]

1/ Keppler, Tr 1884-47, 1981-77, 1981-83, 1998-2002, 2004-09, 2076-84.

2/ Keppler, Tr 1973-76.

3/ Keppler, Tr 1935-36, 1964-66, and prepared testimony at p 4, following Tr 1864.

4/ Keppler, prepared testimony at pp 4-7, following Tr 1864.

5/ Keppler, Tr 2078-79.

6/ NRC Staff Exhibit No 1; Keppler, Tr.

7/ Keppler, Tr 1973.

8/ Keppler, Tr 1935-36, 1964-66 and prepared testimony at p 4, following Tr 1864.

9/ NRC Staff Exhibit No 1 (NRC Staff Inspection Report No 81-12); Staff Exhibit No 3 (NRC Inspection Report No 81-09), Gallagher, prepared testimony, Attachment No 3, (NRC Inspection Report No 80-32/80-33), following Tr, 1754.

10/ Keppler, Tr. 1935-36, 1964, 66 1887, 1942, 2002-09, 2013-2017 and prepared testimony at pp 4-5, 7 9, following Tr 1864.

11/ Keppler, Tr 1913-14, 1977, 1982-83, 2083.

12/ Keppler, prepared testimony at p 8, following Tr 1864.

13/ Keppler, Tr 2004-09, 2017, 1942.

14/ Keppler, Tr 2006-09.

15/ Id.

16/ Id.

17/ Id, prepared testimony, Attachment No 2, at p 5, following Tr 1864.

18/ Id, prepared testimony at p 8, following Tr 1864.

19/ Id., at p 4.

20/ Keppler, Tr 2076-78, and prepared testimony at p 7, following Tr 1864.

21/ Id, prepared testimony, Attachment No 2, at p 11, following Tr 1864.

22/ Id, at p 11-12.

23/ Id, prepared testimony at p 8, following Tr 1864.

24/ Id, prepared testimony, Attachment No 2 at p 12, following Tr 1864.

25/ Id

26/ Id

27/ See discussion supra under "Piping Systems and Supports."

28/ See discussion supra under "Soils and Foundations."

29/ Gilray, Tr 3742-43 (testifying regarding the soils noncompliances identified in NRC Inspection Reports No 80-32 and 80-33)

30/ See discussion supra under "Electrical Power Supply and Distribution."

31/ Keppler, prepared testimony at p 4, following Tr 1864.

32/ Keppler, Tr 2083-84

ANALYSIS OF CURRENT AND FUTURE QUALITY ACTIVITIES WITH REGARD TO REMEDIAL SOILS WORK

At the April 26, 1982 SALP meeting Region Administrator, Mr J G Keppler, expressed concern that his staff had informally characterized the ongoing soils and foundation work as only minimally acceptable. Mr Keppler asked CP Co's management to comment on its impression of this characterization and to provide its suggestion as to how this assessment could be improved.

The following consists of a brief analysis of what Consumers Power perceives to be the basis for this informal characterization and a description of some of the current organizational and programmatic features of the soils activities that lead us to conclude that prospects are excellent for the satisfactory execution of the remaining soils and foundation work.

The soils-related activities at the Midland job site are currently at a relatively low level pending completion of the NRC staff's technical review and release, by the NRC, of the major portion of the remedial work still to be undertaken. The work that has been done thus far in 1982 is concentrated in two areas. First, a significant number of wells have been drilled at the site, as part of the plant dewatering systems, as part of the freeze wall associated with the auxiliary building underpinning activity and to support the site drawdown tests. Second, the major contractor for the auxiliary building underpinning work was mobilized; the initial work on the access shaft was completed; and, in parallel the detailed underpinning construction planning and continuing technical review with the NRC staff of subsequent work was carried out. Very little work in the other remedial soils areas has been accomplished during this period.

In responding to Mr Keppler's comments at the SALP meeting, we believe that the basis for the staff's informal negative comments regarding the current soils quality assurance activities can be traced to one specific area of concern and one more broadly-based general concern. A discussion of each of these follows.

A specific area of work which may have been of concern to the staff, and one of immediate concern to Consumers, relates to the controls on the drilling and excavation activities that have been recently carried out. Because the number of NCR's that had been written in this specific area and the severity of the most recent occurrence (drilling into an electrical duct bank), the Company concluded that even with the formal controls that were previously in place, additional controls were required. As a result on April 28, the Company issued a stop work on all drilling. (This Consumers Power stop work direction preceded the ASLB Order of April 30, 1982.) As of May 12, the stop work order had not been removed, nor will it be until a new detailed drilling and excavation control procedure has been fully reviewed and accepted by Consumers Power Company. While there had been other corrective action taken prior to the CP Co stop work order, the Company is confident that the comprehensive revisions to the prior control procedures on drilling and excavation will preclude errors of the type recently experienced, and will assure that future

drilling and excavating work will be carried out in a satisfactory and controlled manner.

The general and considerably more significant area of inferred NRC concern can only be identified as the lack of timely agreement between the Company and the NRC on the specific quality assurance coverage requirements to be imposed on the remedial soils work, particularly those to be imposed on the underpinning work. The lack of timely resolution of this issue, the apparent misunderstanding regarding the Company's commitments, and the contentious atmosphere at the March 10, 1982 meeting on this subject and at the subsequent inspection undoubtedly contributed to the negative rating informally expressed by the staff.

When the auxiliary building underpinning work started with the first partial NRC release for construction of the vertical access shaft, CP Co presented a special quality assurance plan encompassing, in our opinion, appropriate portions of the underpinning work. This plan was initially presented to the staff at a meeting in Region III headquarters on January 12, 1982 and documented in a letter dated January 7, 1982. While the initial staff response to the plan appeared to be favorable, no official NRC conclusion was expressed. It became evident during the time between January and early March that at least one individual within the NRC staff believed that an extensive modification of the program coverage under the QA plan, MPQP-1, should be required. This preference for expanded NRC requirements became an NRC staff working level position, formally expressed to the Company at the meeting on March 10, 1982. As a result of that meeting, the NRC Region III inspector apparently concluded that Consumers had committed to fully accepting the NRC Staff position that essentially all to-go underpinning work should be Q-listed, unless exceptions are agreed upon. The NRC's meeting minutes reflect no such commitment. In fact, no commitment was made. This misunderstanding, and others arising out of follow-up discussions with the staff, has apparently affected Region III's feelings toward our soils quality assurance program and personnel. It is, therefore, not surprising that the NRC Region III staff considers the quality assurance activities in the soils and foundation area to be in need of improvement based on its recent experience. (It should also be noted that the NRC SALP Board held its second and final meeting on March 23, 1982.) The Company also agrees that it is extremely difficult to avoid regulatory difficulties unless both parties have a common understanding and agreement as to the scope of applicable requirements. The major issue with regard to QA program coverage was resolved at the management level meeting held on March 30, 1982 in Glen Ellyn and documented by the April 5, 1982 letter of J W Cook to J G Keppler, in which the Company agreed to "Q" list essentially all of the to-go underpinning work. However, the staff has still not formally acknowledged its concurrence with that letter. This concurrence would be of significant assistance in documenting the conclusion of the staff's review of program requirements and permitting the redirection of resources from program definition to successful program execution.

Resolution of the concerns noted above will make a significant contribution to the remaining soils work. In addition, the following considerations should provide added confidence that excellent results will be obtained in the remaining soils construction activities.

Dedication of a high quality professional staff to the underpinning and other soils work is of paramount importance to its successful completion. Because of the complexity and importance of the underpinning work as the dominant factor in the soils remedial program, a mini-project of dedicated groups has been set up to focus attention on the soils activities, with particular emphasis on the underpinning. The technical qualifications of the individuals staffing these activities emphasize previous related experience. At the site, specific underpinning groups have been formed within Bechtel construction, Bechtel quality control and MPQAD, all staffed with individuals having significant applicable technical experience and academic credentials. Both Bechtel resident engineering and Bechtel engineering in Ann Arbor have dedicated remedial soils groups. The onsite resident engineering office will have four geotechnical engineers and at least two structural engineers dedicated to supporting the field activities. Consumers Power Company home-office soils activities are currently staffed with two experienced geotechnical engineers and several experienced structural engineers who have been active in the design reviews and prior licensing evaluations and who will continue to follow the soils remedial work throughout the duration of the construction. The overall Consumers Power Company project management of soils is also organized as a mini-project, and the senior Consumers Power Company individual has had significant nuclear power plant experience at the project manager level.

In addition to the on-staff individuals for Consumers Power Company, Bechtel and the major subcontractors, significant consulting resources are also integrated into the soils work. The design consulting firm for the auxiliary building underpinning has a staff man onsite to coordinate with his home office personnel. All the major consultants will be asked to periodically review the job progress as the underpinning work proceeds.

To assist some of the technical specialists in fully understanding all of the quality requirements on the job, some additions to the staff are also planned. The Bechtel underpinning construction group leader, who oversees and interacts with the underpinning subcontractors, will have a quality consultant on his staff to assist him in any and all quality-related matters. It is also anticipated that the underpinning quality control organization will be augmented to enhance its breadth of leadership.

We believe that the NRC themselves can significantly assist in the successful completion of the underpinning and other soils remedial activities by expanding the presence of their lead inspector on the site as the work progresses. Specific steps to facilitate this NRC interaction were agreed upon, as documented in the April 5, 1982 letter referenced above, and complemented by day-to-day working agreements.

A second area which should significantly assist in the successful completion of the remedial soils work, particularly the underpinning activities, is the degree of design completion prior to the work entering the major construction phase. Because of the extent and thoroughness of the NRC staff review, there is a more complete design for the underpinning activities than is normally in place for other construction activities. Essential completion of the calculations for the underpinning work before the major construction phase

begins will minimize the kind of major design changes that can occur in nuclear plant structural design process because of calculation revisions. There will, of course, be design changes as the work progresses, but the degree of calculation completeness reached prior to initial drawing release will significantly contribute to the stability and success of the construction process.

In addition to the degree of completeness in the underpinning design activity, the interface review called for by the quality assurance plan for the underpinning activity, MPQP-1, is also substantial. These reviews will also contribute to both the validity of the design and the general understanding of design requirements and quality attributes by all persons participating in the underpinning activities. In addition, MPQP-1 directly inserted quality assurance (and through quality assurance, quality control) comments into the design review cycle, a significant requirement above and beyond the quality assurance program for the balance of the plant.

The number of procedural controls that have been or are being instituted for this work should also engender confidence that the critical underpinning activities will be satisfactorily controlled. Judging from the work to date, there will be more than 50 specific work procedures developed for the underpinning work. MPQP-1 calls for integration of inspection hold points directly in these construction work procedures. As a result of these steps, the procedural controls for the underpinning work will be more extensive than those for any other activities, with the possible exception of NSSS primary loop activities, covered by the QA program for the balance of the project. The extent of the construction procedures automatically increases the scope of the training activities and of the inspection plans which are developed based on the specific work procedures.

Finally, as a result of the extensive discussions with the NRC staff regarding the coverage of the "Q" program, MPQP-1 is being applied to essentially all of the underpinning work still to be done. While this application may or may not be completely consistent with a strict definition of what is "safety-related," it should lend added assurance that the work in total, and the safety-related work in particular, will be carried out successfully.

In light of the foregoing, it is hoped that the Region III management can gain an appreciation of Consumers Power Company's perception of recent events and that both the Region III management and staff can develop added confidence that the to-go soils work, particularly the extensive underpinning activities, can and will be carried out up to the expectations of both the applicant and the NRC.

Consumers Power Company

James W Cook
Vice President - Projects, Engineering and Construction

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

May 21, 1982

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

MIDLAND PROJECT
RESPONSE TO DRAFT SALP REPORT
FILE: 0.6.1 SERIAL: 17249

At Page 3-1 of Attachment 3 to Consumers Power Company's "Response to Draft SALP Report", dated May 17, 1982, Paragraph 5, the sentence,"As a result on April 28, the Company issued a stop work order on all drilling" should have stated, "As a result on April 28, the Company issued a stop work order on all drilling conducted by Mergentime and its subcontractors." As was previously indicated in the Company's May 10, 1982 letter to H R Denton, which was reviewed with NRR prior to submission, installation of the permanent site dewatering system was being continued (under previously given NRC Staff approval). Region III was also advised, both by a copy of the May 10 letter and by telephone, that work on the permanent site dewatering system was continuing. We regret this inadvertent editorial error.

James W Cook

JWC/JEB/dsb

CC Atomic Safety and Licensing Appeal Board
CBechhoefer, ASLB
MMCherry, Esq
FPCowan, ASLB
RJCook, Midland Resident Inspector
SGadler
JHarbour, ASLB
DSHood, USNRC
RBLandsman, USNRC, Region III
WHMarshall
BStamiris
MSinclair

oc0582-0025a168

MAY 25 1982

BCC WRBird, P-14-418A
AJBoos, Bechtel
JEBrunner, M-1079
DMBudzik, P-24-517A
MLCurland, Midland
LHCurtis, Bechtel
MADietrich, Bechtel-Midland
WDGreenwell, Bechtel
GSKeeley, P-14-113B
BWMarguglio, JSC-220A
DBMiller, Midland
MIMiller, IL&B
JAMooney, P-14-115A
JARutgers, Bechtel
TJSullivan, P-24-624A
DMTurnbull, Midland
RAWells, P-14-113A
NRC Correspondence File

I. INTRODUCTION

The NRC has established a program for Systematic Assessment of Licensee Performance (SALP). The SALP is an integrated NRC Staff effort to collect available observations and data on a periodic basis and evaluate licensee performance based upon these observations. SALP is supplemental to normal regulatory processes used to insure compliance to the rules and regulations. SALP is intended from a historical point to be sufficiently diagnostic to provide a rational basis: (1) for allocating future NRC regulatory resources, and (2) to provide meaningful guidance to licensee management to promote quality and safety of plant construction and operation.

A NRC SALP Board composed of managers and inspectors who are knowledgeable of the licensee activities, met on October 23, 1981 and March 23, 1982, to review the collection of performance observations and data to assess the licensee performance in selected functional areas.

This SALP Report is the Board's assessment of the licensee safety performance at Consumers Power Company's Midland Nuclear Power Plant, for the period July 1, 1980 to June 30, 1981.

The results of the SALP Board assessments in the selected functional areas were presented to the licensee at a meeting held April 26, 1982.

II. CRITERIA

The licensee performance is assessed in selected functional areas depending whether the facility is in a construction, pre-operational or operating phase. Each functional area normally represents areas significant to nuclear safety and the environment, and are normal programmatic areas. Some functional areas may not be assessed because of little or no licensee activities or lack of meaningful observations. Special areas may be added to highlight significant observation.

One or more of the following evaluation criteria were used to assess each functional area.

1. Management involvement in assuring quality.

2. Approach to resolution of technical issues from safety standpoint.

3. Responsiveness to NRC initiatives.

4. Enforcement history.

5. Reporting and analysis of reportable events.

6. Staffing (including management).

7. Training effectiveness and qualification.

However, the SALP Board is not limited to these criteria and others may have been used where appropriate.

Based upon the SALP Board assessment each functional area evaluated is classified into one of three performance categories. The definition of these performance categories is:

Category 1. Reduced NRC attention may be appropriate. Licensee management attention and involvement are aggressive and oriented toward nuclear safety; licensee resources are ample and effectively used such that a high level of performance with respect to operational safety or construction is being achieved.

Category 2. NRC attention should be maintained at normal levels. Licensee management attention and involvement are evident and are concerned with nuclear safety; licensee resources are adequate and are reasonably effective such that satisfactory performance with respect to operational safety or construction is being achieved.

Category 3. Both NRC and licensee attention should be increased. Licensee management attention or involvement is acceptable and considers nuclear safety, but weaknesses are evident; licensee resources appear to be strained or not effectively used such that minimally satisfactory performance with respect to operational safety or construction is being achieved.

III. SUMMARY OF RESULTS

Functional Area Assessment	Category 1	Category 2	Category 3
1. Quality Assurance		X	
2. Soils and Foundations			X
3. Containment and other Safety-Related Structures		X	
4. Piping Systems and Supports			X
5. Safety-Related Components		X	
6. Support Systems	X		
7. Electrical Power Supply and Distribution			X
8. Instrumentation and Control Systems		NOT RATED	
9. Licensing Activities		X	
10. Fire Protection	X		
11. Preservice Inspection		X	
12. Design Control and Design Changes			X
13. Reporting Requirements and Corrective Action			X

IV. PERFORMANCE ANALYSES

1. Quality Assurance

a. Analysis

Effective August 15, 1980, Consumers Power Company reorganized the site QA functions by creating the Midland Plant Quality Assurance Department (MPQAD) which was composed of both Consumers Power Company and Bechtel Power Corporation personnel. This reorganization was instituted in the interest of more comprehensive coverage of QA and more timely resolution of noted discrepancies. Consumers Power Company retains the lead responsibility for QA.

Also during the evaluation period, Consumers Power Company assumed responsibility for all onsite QA and QC functions for installation of HVAC systems. These functions and controls were previously handled by The Zack Company. The changes in responsibility were implemented to "establish more effective QA/QC interface; provide increased technical support; and provide a mechanism to improve inspection performance."

An indepth team inspection was performed May 1981, to evaluate the impact of the changes on the overall QA Program implementation and effectiveness.

Although eight items of noncompliance were identified, the scope and depth of the inspections indicated that Consumers Power Company had established an effective organization for management of QA/QC activities at the site. The inspection revealed that the overall number and qualification of personnel in the licensee's QA organization were above that normally found at other construction sites. The QA programs and overview inspections and audit functions were also above the norm. Adverse findings in piping systems and supports and electrical power supply indicated a need for additional licensee attention in these areas. Seven of the eight noncompliances (Severity Levels V and VI) were addressed in these functional areas.

The eighth noncompliance (Severity Level IV) was generic to several functional areas; a failure of appropriate managers to take prompt comprehensive corrective action to correct identified adverse quality trends. This item of noncompliance was indicative of a hesitancy to determine the "root cause" for increasing numbers of reported deficiencies. This same weakness was evident during the previous SALP period.

In another inspection a Severity Level V noncompliance was identified indicating questionable QA managerial control. The licensee failed to fully evaluate the technical capability of the principal supplier of services for soil boring activities. The NRC identified 15 deficiencies in the principal supplier's Quality Assurance Procedure Manual indicating that the licensee had not adequately reviewed and approved the procedures prior to preparation of drilling activities.

b. Conclusion

The licensee is rated Category 2 in his overall quality assurance capability. Notwithstanding weaknesses identified in specific areas, the licensee has been responsive in establishing an overall effective organization for the management of construction and implementation of quality assurance at the site.

c. Board Recommendations

The Board notes the significant improvements in the overall Quality Assurance Program; however, it is recommended that both the NRC and the licensee give additional attention to the specific problem areas.

2. Soils and Foundations

a. Analysis

During the evaluation period, inspections have been performed to examine the licensee's implementation of corrective actions regarding the 10 CFR 50.54(f) request for additional information pertaining to soils settlement; observation of soils work activities and to witness taking of soil borings requested by NRC reviewers and consultants.

Since 1978, the soils settlement issues have been paramount in the amount of attention by the NRC to this licensee. This activity resulted in an order issued December 1979, which is the basis for a ongoing hearing on the soils settlement issues. A multitude of effort by the NRC and licensee has gone into soil testing and major review of the FSAR and design control. In spite of this attention, every inspection involving regional based inspectors and addressing soils settlement issues has resulted in at least one significant item of noncompliance. The enforcement history for this functional area during this SALP period is as follows:

Two Level IV noncompliances were identified in NRC Inspection Reports No. 50-329/80-32; 50-330/80-33.

(1) Failure to initiate audit corrective action concerning the rereview of the FSAR and references to determine if design documents had modified the FSAR and if so that changes had been made to the FSAR.

(2) Three examples of failure to translate applicable regulatory requirements and design criteria into design documents.

(a) Failure to maintain a coordination log of Specification Change Notices (SCN).

(b) Failure to correctly translate Specification Change Notice No. SCN-9004 as a requirement into Revision 20 of Specification C-208.

(c) Failure of Engineering Department Project Instruction No. EDPI 4.25.1, Revision 8 to establish adequate measures for design interface requirements.

One Level V noncompliance and a deviation were identified in NRC Inspection Reports No. 50-329/81-01; 50-330/81-01.

(1) Failure to establish test procedures for soils work activities.

(2) Failure to supply a qualified onsite geotechnical engineer.

One Level V noncompliance was identified in NRC Inspection Reports No. 50-329/81-09; 50-330/81-09 which is discussed under the Quality Assurance Section. However, the finding of lack of QA was a result of attempting to review the QA associated with procuring soil boring samples.

Failure to evaluate the technical capabilities of Woodward-Clyde (principal supplier of services for soil boring activities) prior to procurement of a drilling contractor.

It was noted in NRC Inspection Reports No. 50-329/81-12; 50-330/81-12 that a sufficient number of qualified personnel were not available for the complex aspects of the remedial soils work. This had previously been identified in NRC Inspection Reports No. 50-329/81-01; 50-330/81-01, referenced previously as a deviation to a commitment.

b. Conclusion

The licensee is rated Category 3 in this area. The enforcement history indicates that additional licensee attention is warranted.

c. Board Recommendations

The Board recommended continued NRC inspection activity for each major evolution in the resolution of soils settlement issues.

The issues identified during this evaluation period were addressed with the licensee and were thought to be resolved. However, following this evaluation period there was a period when very little physical work in the soils settlement and underpinning area was initiated onsite. When actual physical work was resumed it was found that adequate QA/QC attention was not given to these work activities. These areas have again been addressed and are believed to be resolved. Continued attention is required by both the NRC and the licensee.

3. Containment and Other Safety-Related Structures

a. Analysis

During the evaluation period, containment prestressing system procedures were reviewed; selected work activities associated with tendon insertion and buttonheading for Unit 1 were observed and prestressing system material records for Unit 1 and quality records for Units 1 and 2 were reviewed.

During the previous evaluation period the licensee experienced difficulty in installation of prestressing tendons. However, these difficulties did not exist during this evaluation period.

The Senior Resident Inspector witnessed portions of the atmospheric hydrostatic test placed on the borated water storage tanks (BWST) including an examination by Quality Control and the Authorized Nuclear Inspector. The hydrostatic test was done in an acceptable manner. Although the hydrostatic test was completed without complications, loading of the BWST with water resulted in cracks developing in the valve pit area associated with these tanks.

b. Conclusion

The licensee is rated Category 2 in this area. The licensee's performance appears to be satisfactory, no significant strength nor weaknesses were identified.

c. Board Recommendations

None.

The Board notes that subsequent to the evaluation period it was determined that the cracking in the valve pit support walls was related to soils issues.

4. Piping Systems and Supports

a. Analysis

During the evaluation period, installation of large and small bore piping and pipe hanger systems (including storage of piping components) was examined and noted in seven different inspection reports of regularly scheduled inspection activities. Three of these inspections, including a team inspection, resulted in seven items of noncompliance and an isolated instance of inadequate dunnage in a temporary storage area. The following items of noncompliance indicate weakness in the implementation of the QA program.

(1) Bechtel Purchase Order did not specify applicable codes for purchase of 60,000 pounds of E7018 electrode (Infraction).

(2) Bypass of an inspection hold point for pressurizer surge piping (Infraction, Unit 2 only).

(3) Failure to install large bore pipe restraints, supports, and anchors in accordance with design drawings and specifications (Severity Level V).

(4) Failure of QC inspector to reject large bore restraints, supports and anchors that were not installed in accordance with design drawings and specifications (Severity Level V).

(5) Failure to prepare, review and approve small bore pipe and piping suspension system designs performed onsite in accordance with design control procedures (Severity Level IV).

(6) Failure to adequately control documents used in site small bore piping design activities (Severity Level V).

(7) Failure of audits to include a detailed review of system stress analysis and to follow up on previously identified hanger calculation inconsistencies (Severity Level V).

Based upon the last five items of noncompliance, an Immediate Action Letter (IAL) was issued on May 22, 1981, pertaining to the design control and issuance of drawings for the installation of small bore piping and support systems.

b. Conclusion

The licensee is rated Category 3 in this area. The enforcement history is indicative of weaknesses in the implementation of the quality assurance program.

c. Board Recommendations

The Board notes that subsequent to the evaluation period an inspection on July 16-17 and 23-24, 1981, verified that the licensee had satisfactorily addressed the provisions of the May 22, 1981, IAL. Also on July 27, 1981, the licensee submitted a letter of understanding to the NRC stating the actions to be taken to control modification to small bore piping drawings which do not have Committed Preliminary Design Calculations.

The Board recommends increased licensee and NRC attention.

5. Safety-Related Components

a. Analysis

During the evaluation period, NRC Inspectors observed alignment of reactor coolant pumps; installation of lower core support assembly vent valves and associated portions of quality documentation. The enforcement history consisted of two items of noncompliance and a Confirmatory Action Letter. All were issued as a result of NRC findings during the installation of the core support assembly vent valves.

The following is a summary of the items of noncompliance which culminated in a letter of understanding issued by the licensee on January 22, 1981.

(1) Failure to have an appropriate procedure for installation of vent valves (Severity Level V).

(2) Failure to follow access control procedures and account for items used in the assembly of the Unit 2 core support assembly vent valves on the equipment entry log (Severity Level V).

The licensee's letter of understanding stated that the Stop Work Order on assembly of core support assembly vent valves would remain in effect until procedures, personnel training and QA overview inspection plans are upgraded.

b. Conclusion

The licensee is rated Category 2 in this area. The above enforcement was aimed at an isolated instance and may have

been directly related to changes in NSSS QC personnel changes. The licensee had in the past and since this episode maintained adequate QA control for assembly of NSSS equipment (particularly reactor internals).

c. Board Recommendations

None.

6. Support Systems

a. Analysis

On January 7, 1981, a $38,000 Civil Penalty was levied against the licensee for QA deficiencies in the installation of heating, ventilating, and air conditioning (HVAC) systems which were noted during an investigation during the period of March 6, 1980 to July 31, 1980. Seventeen items of non-compliance were identified during this investigation and one additional item was identified in a later report (NRC Inspection Report No. 50-329/80-22). The later item was not considered in the Civil Penalty.

The above enforcement history was reflected in the previous SALP evaluation. The licensee has made significant improvement in correcting programmatic weaknesses identified in the Civil Penalty. Since the investigation, the licensee has accepted complete responsibility for HVAC System QA/QC functions. This aggressive action of taking over the QA/QC function from the subcontractor has resulted in marked improvement in the control of the HVAC installations.

b. Conclusion

The licensee is rated Category 1 in this area. Management attention and involvement has been aggressive in accepting full QA/QC responsibility and supporting this organization with an adequate number of skilled personnel.

c. Board Recommendations

The licensee should continue his attention in this area to assure a continued high level of performance. The NRC should continue inspection efforts in this area to assure the licensee commitments are being met.

7. Electrical Power Supply and Distribution

a. Analysis

During the evaluation period, two routine inspections and part of a team inspection were performed in the electrical

area. Portion of five other inspections addressed specific electrical items with one of these inspections addressing the in place storage condition of electrical equipments. As a result of the inspection effort dedicated to the electrical area, six items of noncompliance were identified. The inspection effort into the equipment storage conditions resulted in a single item of noncompliance with three examples; two of these examples were for electrical equipment.

There was essentially no electrical installation work performed for more than six months into the evaluation period because of the need to perform re-engineering to permit routing of the cables without thermal and/or physical overload of the raceways. When electrical work was resumed, it was done on a very ambitious schedule. Prior to this resumption of work the NRC had verbally advised the licensee on the need for adequate QA/QC coverage. However, it appears that not enough qualified QC personnel, rigorous QA audits and established procedural controls were invoked to avoid the following list of enforcement items.

(1) Failure to establish procedures for temporary support of cable, cable coils---and for routing cables (Severity Level V)

(2) Electrical contractors failed to verify conformance to Paragraph 3.1 of Project Quality Control Instruction E-5.0, failure to perform adequate inspection (Severity Level V)

(3) Failure to identify and control nonconforming components (Severity Level V)

(4) Failure to translate design criteria into drawings and specifications (Severity Level V)

(5) Failure to identify during inspection that a nonconforming condition with regard to minimum installed cable bend radius existed (Severity Level VI)

(6) Failure to take proper corrective action with regard to the lack of approved procedures for the rework of electrical raceways (Severity Level V)

(7) Failure to provide adequate storage conditions for (Severity Level V)

(a) Control Rod Drive Primary AC Breakers
(b) New and spent fuel storage racks
(c) Emergency battery chargers

b. Conclusion

The licensee is rated Category 3 in this area. The enforcement history indicates a lack of management attention and involvement. This is evident by apparent inadequate preplanning and assignment of priorities as activities increased, a poor understanding of procedures for control activities and minimal QC staffing for the magnitude of the activities.

c. Board Recommendations

The Board recommends increased attention by both the licensee and NRC. Inspection effort should place particular emphasis on those areas of heaviest activity for the month preceeding the inspection with particular emphasis on the number and qualification of QC personnel.

The Board notes that the licensee performed an internal audit of the area and initiated corrective action subsequent to the evaluation period. This audit was limited and the licensee has indicated that it did not address all NRC concerns. The results of this audit have not been evaluated by the NRC.

8. Instrumentation and Control Systems

a. Analysis

The licensee is not rated in this area because a minimal amount of instrumentation installation and minimal inspection effort during this evaluation period.

b. Conclusion

None.

c. Board Recommendations

Based upon the findings in electrical power supply and distribution, the Board recommends increased licensee and NRC attention commencing with increased installation activities. Particular emphasis should be placed on design control and QC coverage. This increased inspection effort could be done coincident with electrical inspections.

9. Licensing Activities

a. Analysis

Responses and submittals during this review period have principally regarded the soils settlement issue, including seismic input and responses to Post-TMI requirements

(NUREG-0737). During the earlier part of this review period, replies to staff's request were not substantive and tended to argue the staff's need for that information; once a staff position was taken, the replies tended to become responsive. Hence, the quality of the response tends to be acceptable once the need is firmly established. Because of the time expended in establishing a need, more than the normal amount of time and effort are required to obtain acceptable and substantive responses. Recent responses establishing new seismic design criteria for the site have been of high quality once the staff's position letter established the need.

The licensee is considered to be technically competent and is an experienced utility with two operating nuclear plants. Timely close out of long-standing open items is reasonable when considering the many open items on this plant, the early plant design and interrupted staff review following the TMI-2 accident.

b. Conclusion

The licensee is rated Category 2 in this area. Early responses during the evaluation period were lacking in responsiveness. However, the more recent responses tend to be substantive and of acceptable quality.

c. Board Recommendations

None.

10. Fire Protection

a. Analysis

During the evaluation period, the Senior Resident Inspector toured selected areas of the site each month to assess the cleanliness of the site and determine the potential for fire or other hazards which might have a deleterious effect on personnel and equipment. The site has maintained an adequate safety record during this SALP period. A substantial portion of the site safety program is devoted to fire protection. The licensee conducts weekly training and drills for the on site fire brigade. The fire brigade has consistantly passed the quarterly fire drills imposed by the licensee's insurance agency. Volatile chemicals are controlled and issued in small quantities in metal containers. Volatile chemicals, oils, combustibles and trash are not tolerated in an unclean and uncontrolled state. Fire hazards were minimized during the evaluation period and the licensee has accrued a multi-million-hour safety record.

b. Conclusion

The licensee is rated Category 1 in this area. Management attention has resulted in a high level of performance in this area.

c. Board Recommendations

None.

11. Preservice Inspection

a. Analysis

During the evaluation period, three routine inspections were performed to evaluate the Ultrasonic Testing (UT) of the reactor pressure vessels by South West Research Institute (SWRI) and the preservice inspection being performed by Babcock & Wilcox (B&W). The inspection effort revealed that adequate management controls existed for the inservice inspection program, procedures, and material and equipment. The licensee responses to IE Bulletins was determined to be complete in this area. The data reports demonstrated that QA/QC audits and requirements are met. The qualifications and training of SWRI and B&W personnel was in accordance with SNT-TC-1A, 1975.

b. Conclusion

The licensee is rated Category 2 in this area. The licensee's performance appears satisfactory, no specific strengths nor weaknesses were identified.

c. Board Recommendations

None.

12. Design Control and Design Changes

a. Analysis

During the evaluation period, three items of noncompliance were identified against 10 CFR 50, Appendix B, Criterion III, Design Control and one item against Criteria XVI, Corrective Action which was closely related to deficiencies in design control. These items of noncompliance have been addressed in other sections of this SALP Report. However, the common bond between these items of noncompliance is that each addresses inadequate design control.

The following is a reference list of these items of noncompliance:

(1) Section 1, Soils and Foundations

(a) Failure to initiate preventive action to preclude repetition of not identifying design documents.

(b) Three examples of failure to translate applicable regulatory requirements and design criteria into design documents.

(2) Section 3, Piping Systems and Supports

Failure to prepare, review and approve small bore pipe and piping suspension system designs performed onsite in accordance with design control procedures.

(3) Section 6, Electrical Power Supply and Distribution

Failure to translate design criteria into drawings and specifications.

In addition to the enforcement items listed above, an Immediate Action Letter (IAL) was issued by the NRC pertaining to design control and issuance of drawings for the installation of small bore piping. This item was previously iterated in Section 5, Piping Systems and Supports.

Also, the following five 10 CFR 50.55(e) summaries, which were among the twelve Construction Deficiency Reports submitted demonstrates there was lack of QA in design control and these instances should have been licensee controllable.

(a) High Energy Line Break Analysis (HELBA), steady state thrust forces rather than transient peak thrust forces were used in the energy balance techniques for the design of HELBA pipe whip restraints.

(b) Component Cooling Water (CCW) Design, CCW system susceptibility to Loss of Coolant Accident (LOCA) induced failures.

(c) Seismic model of Auxiliary Building has incorrect assumption that control tower and main portion of Auxiliary Building are an integral unit between elevation 614 and 659.

(d) Borated Water Storage Tank Foundation stress cracks.

(e) Shear reinforcement at major containment penetrations.

The fact that the licensee is able to identify design deficiencies through their audit programs and take appropriate action is commendable. However, these design deficiencies would not occur if there were more stringent control at the source of these design errors and deficiencies.

b. Conclusion

The licensee is rated Category 3 in this area. The amount of re-engineering that has transpired in electrical, civil and piping areas and the specific design control weaknesses discussed in Soils and Foundations, Piping Systems and Supports and Electrical Power Supply and Distribution indicate significant weaknesses in overall design control.

c. Board Recommendations

The Board recommends increased licensee and NRC attention to design control in all functional areas. Although design control weaknesses were evident and considered in the ratings of Soils and Foundations, Piping Systems and Supports, and Electrical Power Supply and Distribution, the Board considered it appropriate to provide a separate rating to direct special attention to design control and provide meaningful guidance to licensee management. The use of the separate rating was intended to highlight the fact that design control weaknesses were evident in several areas. This should not be interpreted as using the same observations twice to downgrade several areas. The Board felt that the Soils, Electrical and Piping areas would have been rated the same had design control aspects been found to be adequate.

13. Reporting Requirements and Corrective Action

a. Analysis

During the evaluation period, the licensee submitted twelve Construction Deficiency Reports to the NRC. These reports provided an adequate although sometimes minimal description of the circumstances warranting the issuance of the report.

One item of noncompliance (Infraction) was identified when the licensee failed to make a timely determination for the need to submit a 10 CFR 50.55(e) report to the NRC based on a 10 CFR Part 21 report from Transamerica DeLaval, Inc. The Part 21 report pertained to diesel engine link rod clearances. The licensee has taken positive actions to ensure that any safety-related information received pertinent to the Midland Site is evaluated with respect to the impact on overall safety.

Expeditious resolution of noncompliances is often delayed by inadequate licensee responses. The licensee has a tendency to spend too much time trying to justify why a finding is not a noncompliance rather than devoting the

time correcting the basic problem. Nine of 22 items of noncompliance were contested (excluding HVAC System non-compliances). Two of the contested noncompliances were retracted, but time and effort were lost in timely resolutions. Similar attitudes and responses have been observed regarding company audit findings. This attitude is reflective of the licensee corrective actions system and becomes a detriment to quality.

b. Conclusion

The licensee is rated Category 3 in this area. The licensee responses to enforcement items and internal audit findings are often delayed requiring repeated submittal to obtain acceptable resolutions.

c. Board Recommendations

None.

The Board notes that subsequent to the evaluation period, the licensee management was invited to a meeting in the Regional Offices to discuss what constitutes an adequate response to noncompliances.

V. SUPPORTING DATA AND SUMMARIES

A. Noncompliance Data

Facility Name: Midland, Unit 1 Docket No. 50-329
Inspections No. 80-10, 80-17, 80-20 through No. 80-37
81-01 through No. 81-13

Functional Areas	Noncompliances and Deviations[1] Severity Levels I	II	III	IV	V	VI	Categories Viol.	Infr.	Def.	Dev
1. Quality Assurance				(1)	(1)					
2. Soils and Foundations				(2)	(1)					(1)
3. Containment and other Safety-Related Structures										
4. Piping Systems and Supports				(1)	(4)			(1)		
5. Safety-Related Components										
6. Support Systems[2]								(15)	(3)	
7. Electrical Power Supply and Distribution					1+(5)					
8. Instrumentation and Control Systems										
9. Licensing Activities										
10. Fire Protection										
11. Preservice Inspection										
12. Design Control and Design Changes										
13. Reporting Requirements and Corrective Action								(1)		
TOTALS				4	12			17	3	1

[1] Numbers in parenthesis indicate noncompliances common to both units.

[2] The total includes 17 items of noncompliance associated with HVAC problems addressed in the previous SALP evaluation. They are included here because of an overlap in the two SALP periods.

Facility Name: Midland, Unit 2 Docket No. 50-330
Inspections No. 80-11, 80-18, 80-21 through No. 80-38
81-01 through No. 80-13

Functional Areas	Noncompliances and Deviations[1] Severity Levels I	II	III	IV	V	VI	Categories Viol.	Infr.	Def.	Dev
1. Quality Assurance				(1)	(1)					
2. Soils and Foundations				(2)	(1)					(1)
3. Containment and other Safety-Related Structures										
4. Piping Systems and Supports				(1)	(4)			1+(1)		
5. Safety-Related Components					(2)					
6. Support Systems[2]								(15)	(3)	
7. Electrical Power Supply and Distribution					(5)	1				
8. Instrumentation and Control Systems										
9. Licensing Activities										
10. Fire Protection										
11. Preservice Inspection										
12. Design Control and Design Changes										
13. Reporting Requirements and Corrective Action								(1)		
TOTALS				4	13	1		18	3	1

[1] Numbers in parenthesis indicate noncompliances common to both units.

[2] The total includes 17 items of noncompliance associated with HVAC problems addressed in the previous SALP evaluation. They are included here because of an overlap in the two SALP periods.

B. Licensee Report Data

1. Construction Deficiency Reports (CDR's)

Twelve (12) Construction Deficiency Reports (CDR's) reported pursuant to 10 CFR 50.55(e), were received by the regional office during the period of July 1, 1980 and June 30, 1981. The following list is a summary of each reportable item:

*a. High Energy Line Break Analysis (HELBA), steady state thrust forces rather than transient peak thrust forces were used in the energy balance techniques for the design of HELBA pipe whip restraints

b. Sway Strut Rod Ends Deficiency, ITT Grinnell supplies sway struts, snubbers and shock suppressors have loose or totally disengaged rod end bushings

*c. Component Cooling Water (CCW) Design, CCW system susceptibility to Loss of Coolant Accident (LOCA) induced failures

d. Nuclear Steam Supply System (NSSS) analysis, anomalies identified in the NSSS seismic and Loss of Coolant (LOCA) analysis of the primary system

e. Emergency Core Cooling Actuation System (ECCAS) vendor wiring in the ECCAS cabinets 1C45 and 2C45 was inconsistent with redundant subsystem modules in the cabinets

f. Low alloy quenched and tempered bolting 1 1/2 inches and greater in support of safety-related systems

g. Underrated Terminal Strips on Limitorque Operators

*h. Seismic model of Auxiliary Building has incorrect assumption that control tower and main portion of Auxiliary Building are an integral unit between elevation 614 and 659

*i. Borated Water Storage Tank Foundation stress cracks

j. ITE Gould Class 1E equipment, unqualified cable used to wire equipment and/or controls

*k. Shear reinforcement at major containment penetrations

l. Operation of reactor cavity cooling system

*Indicates may have been licensee controllable and are indicative of lack of QA in design control.

2. Part 21 Reports

No Part 21 reports were initiated by the licensee during the reporting period.

C. Licensee Activities

The licensee continued to construct both units at the same rate and achieved approximately 70% completion during the reporting period. Safety-related electrical installation was recommenced with vigor after a period of reduced activity while additional engineering was performed. Assembly of vessel internals, closure head and reactor coolant pumps aggressively continued during the period. As a portion of the resolution for soils settlement issues, extensive soil samples and borings were taken and work commenced on dewatering wells.

D. Inspection Activities

A major "team" inspection was accomplished on May 18-22, 1981, which resulted in an issue of an Immediate Action Letter (IAL) pertaining to installation of small bore piping.

Heavy inspection effort was expended to follow the resolution of soils settlement issues and taking of soil samples. Inspections in the electrical area have increased to be commensurate with the increase in licensee efforts in this area.

E. Investigations and Allegations Review

None were pursued during the evaluation period.

F. Escalated Enforcement Actions

1. Civil Penalty

On January 7, 1981, a $38,000 civil penalty was issued by the NRC as a result of an investigation pertaining to the installation of heating, ventilating and air conditioning equipment and systems. Nineteen items of noncompliance were identified in 10 of the 18 Appendix B criteria (10 CFR 50, Appendix B). The investigation was completed in July 1980. Two of the noncompliances were later retracted.

2. Orders

None.

3. Immediate Action Letters

On May 22, 1981, an Immediate Action Letter (IAL) was issued by the Region III Office of Inspection and Enforcement concerning the issuance of fabrication and construction drawings

for the installation of the safety-related small bore piping and piping suspension systems.

4. Confirmatory Action Letter

(a) On January 22, 1981, Consumers Power Company issued a letter to the Director of Region III stating that their Stop Work Order of January 16, 1981, to B&W for installation of Core Support Assembly Vent Valves would remain in effect until the procedures were revised, training of personnel was completed, and the overview inspection plan was revised. This action was taken in lieu of Region III, Office of Inspection and Enforcement issuing an Immediate Action Letter.

(b) On July 27, 1981, Consumers Power Company issued a letter to the Director, Region III delineating those actions to be taken to control modification to drawings which do not have the required Committed Preliminary Design Calculations (CPDC) and that the methodology for modifications to be fully documented and submitted to the Regional Office for review. This action was taken in lieu of Region III Office of Inspection and Enforcement issuing an Immediate Action Letter.

G. Management Conferences

Three meetings were held with Consumers Power Corporate Management during the appraisal period.

1. The first meeting was held on November 24, 1980 and continued on December 2 and 17, 1980. The purpose of the meeting was to discuss the Systematic Assessment of Licensee Performance (SALP) and to be present for the licensee's presentation of the recently reorganized QA organization. (Inspection Reports No. 50-329/80-36 and 50-330/80-37).

2. The second meeting was held March 13, 1981, to discuss the Midland Project Organization, Midland QA Program evaluation and the new external quality consultation. (Inspection Reports No. 50-329/81-05 and 50-330/81-05).

3. The third meeting was held on May 22, 1981, to discuss the results of the team inspection of May 18 to 22, 1981. (Inspection Reports No. 50-329/81-12 and 50-330/81-12).