

Bethesda, Maryland
(LOCATION)

April 16, 1982
(DATE)

I, Darl S. Hood, hereby make the following statement to Charles H. Weil, who has identified himself to me as an Investigator of the United States Nuclear Regulatory Commission. I make this statement freely with no threats or promises of reward having been made to me.

DSH

On March 10, 1982, I attended a meeting in Bethesda, Maryland with other NRC, Consumers Power Company (CPCo), and Bechtel personnel to discuss quality assurance to be applied to remedial foundation work at the Midland Plant, Units 1 and 2. A summary of this meeting, dated March 12, 1982, was subsequently issued under my signature. I also attended a meeting on March 30, 1982, in Glen Ellen, Ill. with other NRR, Region III, and CPCo personnel regarding earlier observations of Region III inspectors that cable pulling for monitoring instrumentation to be relied upon during underpinning construction of the Midland Auxiliary Building was not being performed in accordance with appropriate quality requirements. The purpose of this statement is to describe my recollection of statements during the March 10 and March 30, 1982, meetings as to whether installation of underpinning monitoring instrumentation was to ^{be} Q-listed. _{DSH}

Paul A. Wright

As noted in the March 12, 1982, summary report of the March 10 meeting, CPCo and Bechtel proposed a new designation of "QA" for certain underpinning work on the basic premise that adverse impact to the structure from this temporary work would only affect CPCo's ability to obtain a license, and would not ^{DSH} impact public health and safety. The proposal, however, as described by Mr. A. Boos of Bechtel on behalf of CPCo, was that a monitoring program to determine the affect on safety-related structures of all work, including temporary loads, would be in place and would be "Q". Following a caucus to consider the proposal, I advised CPCo that the NRC does not accept the "QA" classification, and that "from this point forward", March 10, 1982, all further underpinning activities are to be Q-listed except for very specific items which can be shown on a specific basis to justify non-Q treatment. I further stated that NRC concurrence in this justification must be obtained prior to conducting any work efforts completely outside the quality plan. In the March 12, 1982, summary report, the term "NRR" is used, rather than "NRC". At the March 30, 1982, meeting I identified this error and reiterated that the March 10, 1982, discussion had identified this as a Region III lead item.

Mr. Mooney of CPCo asked if this position applied to "Phase I" activities which had already been approved by the NRC, and he noted that "certain activities are now in process". Mr. A. Boos also stated this meant they would have to immediately stop work. I replied that by "from this point forward", I did not mean to include Phase I since the staff had already approved that on a non-Q basis, and that I was aware that installation of the vertical access shaft was well underway. Rather, I continued, I meant the position to begin with the start of Phase 2. Other than the possibility *DSH*

Continuation of Statement of Darl S. Hood

DSH

of Mr. Mooney's comment that "certain activities are now in process" (which I took to be directed to installation of the vertical assess shaft), I do not recall any statement, on March 10, 1982, that instrumentation was to be other than Q or that CPCo considered this to be part of Phase 1. I do not recall any discussion at the March 10th meeting regarding the status of instrumentation installation.

On March 18, 1982, I was at the Midland site along with Messrs Joseph Kane and Frank Rinaldi of NRR to observe and discuss cracks in the Diesel Generator Building. Mr. Kane and I observed the location of a deep seated bench mark being relocated inside the Auxiliary Building which had encountered artesian pressure. We were told that the new location had not been established at that time. We also met briefly with Messrs. R. Landsman, R. Gardner, and R. Cook of Region III who informed us that underpinning instrumentation was being installed without Q listed cable pulling procedures and that they had called their Region III Office about issuance of an Immediate Action letter. Mr. Landsman also stated that he had been told by CPCo personnel that installation of the instrumentation was in progress during the March 10, 1982, meeting and therefore was not subject to the NRC position given at that meeting. Mr. Landsman said that this statement by CPCo personnel was not accurate. He had also been told that CPCo planned to perform a post-installation check and that CPCo considered this to be sufficient. Mr. Landsman then asked me if I would support a decision to issue an Immediate Action letter to stop the work. I replied that installation without Regions III's previous concurrence of non-Q status was inconsistent with the NRC's March 10, 1982, position since the instrumentation is part of Phase 2, and that I would support his decision on this basis. I also replied that whether a post-installation check was sufficient was up to Region III, and that NRR's position is that the monitoring instrumentation must be both reliable and accurate.

On March '30, 1982, I attended a meeting at the Region III Offices, Glen Ellen, Ill. with other NRR, Region III and CPCo personnel to discuss Region III's concern on this instrumentation matter. During this meeting Mr. J. Cook of CPCo indicated he considered installation of the instrumentation to be part of Phase 1 because NRR had previously stated that instrumentation must be in place and operational before beginning Phase 2. Mr. J. Cook's statement appears to be consistent with the title of Enclosure 1 of Mr. R. Tedesco's letter of March 22, 1982. R. Tedesco's letter of March 22, 1982, "Compilation of Information Requested for Completion of Staff Review of Phase 2 Underpinning of Midland Auxiliary Building" forwards an Enclosure 1 entitled "Identification of Review Concerns Prior to Initiating Phase 2 Underpinning Work Midland-Auxiliary Building". Page 1 of that enclosure (which documents earlier, identified discussions) lists, in part:

4. CPC commitment to have 6 deep seated bench marks with instruments installed and operational before beginning Phase 2a work. (Telephone record, March 8, 1982, Par. 4.B and Par. 5). Also instruments DMD-1W, DMD-1E, DSB-1W, DSB-1E are to be installed and operational. (Feb. 3-5 Design Audit).

DSH

Continuation of Statement of Darl S. Hood

I replied to Mr. J. Cook that this interpretation was not what had been intended. It was the NRR's intent that the instrumentation be in place and operating before any excavation beneath structures commences. Moreover, activities associated with installation of the vertical assess shaft was part of Phase 1, and activities associated with excavation beneath structures (the Turbine Building and Feedwater Isolation Valve Pits) was Phase 2. Hence, it was the NRR's intent that instrumentation be installed under the Quality Assurance program and operating as the initial step of Phase 2.

On the basis of Mr. J. Cook's statement of March 30, 1982, I am now of the opinion that miscommunication occurred between NRR and CPCo with respect to whether the instrumentation was required by NRR to be Q-listed and that this apparently contributed to CPCo's decision to pull the cables without Q-listed procedures. DSH

I have read the foregoing statement consisting of 3 ^{DSH} pages. I have made any necessary corrections, and I have initialed those corrections. This statement is the truth to the best of my knowledge and belief. I declare under the penalty of perjury that the foregoing is true and correct. Executed on April 16, 1982 at 8:04 AM.
(Date) (Time)

Subscribed and sworn to before me this 16th day of APRIL, 1982 at BETHESDA MD.

Charles H. West
CHARLES H. WEST, INVESTIGATOR
U.S. NUCLEAR REGULATORY COMMISSION
6600 6617A, SUITS 60137

Darl S. Hood
(Signature)
U.S. Nuclear Regulatory Commission
Washington D.C. 20555
(Address)



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

MAR 22 1982

Docket Nos: 50-329/330 OM, OL

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

Dear Mr. Cook:

Subject: Compilation of Information Requested for Completion of Staff
Review of Phase 2 Underpinning of Midland Auxiliary Building

Pursuant to the request of Mr. J. Mooney of your Company on March 11, 1982, Enclosure 1 is a compilation of the information needed for completion of the NRC's review of "phase 2" of the construction activities for underpinning of the Midland Auxiliary Building. "Phase 2" is defined by the Construction Sequence Logic Diagram provided the staff during a January 18-19, 1982 audit meeting (Enclosure 1 of our meeting summary dated March 10, 1982), and generally provides for further deepening of the vertical access shaft, construction of limited drifts under the Feedwater Isolation Valve Pits (FIVPs) and Turbine Building, and installation of certain piers.

Your prompt attention to these matters should provide for staff concurrence with minimal impact to your present construction schedule.

The reporting and/or recordkeeping requirements contained in this affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

A handwritten signature in cursive script, appearing to read "R. Tedesco".

Robert L. Tedesco, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

cc: See next page

~~8204090115~~

EXHIBIT XIII

MIDLAND

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Mr. J. W. Cook

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Identification of Review Concerns Prior to Initiating Phase 2
Underpinning Work Midland - Auxiliary Building

I. GEOTECHNICAL ENGINEERING

Phase 2a*

- | <u>No.</u> | <u>Review Concern</u> |
|------------|--|
| 1 | Submittal of Updated Construction Sequence Drawing (Identified in Feb. 3-5 Audit and Feb. 26, 1982 Meeting). |
| 2. | Letter documenting actual work to be performed under Phase 2a (telephone record, March 8, 1982, Par. 3). Letter should provide commitment not to proceed with 2b until the analyses using NRC recommended stiffness values are completed and results reviewed by NRC Staff. |
| 3. | Update drawing of "Monitoring Matrix", No. C-1493(Q) that will include tolerance criteria (Telephone record, Mar. 8, 1982, Par. 4.b). |
| 4. | CPC commitment to have 6 deep seated bench marks with instruments installed and operational before beginning Phase 2a work. (Telephone record, March 8, 1982, Par. 4.B and Par. 5). Also instruments DMD-1W, DMD-1E, DSB-1W, DSB-1E are to be installed and operational. (Feb 3-5 Design Audit). |
| 5. | Submittal of strain gage installation details @ E1 659 with limiting strain values and basis (Feb. 26, 1982 meeting and telephone record, Mar. 8, 1982, Par 4.d). |
| 6. | Commitment to perform test load above design load (e.g., 1.30 times) on installed pier to develop load-deflection curve for verification of hard clay soil modulus. Identify pier. (Feb. 3-5 Design Audit). |
| 7. | Submittal of measures to be required during periods of work shutdown to support faces of drifts and bottoms of pits (Feb. 3-5 Design Audit). |
| 8. | Submittal of plans for dewatering localized water pockets (e.g., placing wells in sand fill around reactor perimeter) in advance of pit construction (Feb. 3-5 Design Audit). |

* Phase 2a items are those not impacted by analyses of the change in-soil modulus values beneath the main Auxiliary Building.

Phase 2b

- | <u>No.</u> | <u>Review Concern</u> |
|------------|--|
| 1. | Provide instrumentation details and horizontal movement tolerance criteria with basis, for 3 instruments to be installed at top of EPA's and Control Tower (Telephone record, March 8, 1982, Par. 4.c and Par. 5). |
| 2. | Submittal of results from analysis that establishes induced stresses at El 659 assuming EPA is supported by first temporary support (Pier W8) and using Existing Soil Springs under EPA and Control Tower and Auxiliary Building (Feb. 3-5 Design Audit) |
| 3. | Commitment by CPC to have installed and operational all of the remaining instruments identified on Drwg C-1493(Q). |

II. STRUCTURAL ENGINEERING (Phase 2a)

Strain gauges or equivalent shall be provided at critical locations, including:

- a. Elevation 659' slab
- b. Control Tower shear wall
- c. Slabs and walls near post-tensioning cables at the Control Tower and Electrical Penetration Areas
- d. Steel beams shall have strain gauges, and not deflection meters.

Information shall be provided for these gauges regarding:

1. Location
2. Monitoring frequency
3. Limits (initial and distress points)
4. Evaluations of results (method and acceptance criteria)
5. Commitment that instruments shall be in place and operational before beginning Phase 2a.

III. MECHANICAL ENGINEERING BRANCH (Prior to drifting beneath FIVP)

1. Allowable movements shall be based upon total settlements since the main feedwater piping was first installed in 1977.
2. A commitment that the 2" steam generator drain lines shall first be shown not to be limiting for allowable structural movements in the event a decision should be made to connect this piping prior to completion of underpinning.

IV. QUALITY ASSURANCE

Applicant shall notify NRC that all underpinning construction will be Q listed consistent with the NRC Staff's findings during the meeting of March 10, 1982.