



Consumers  
Power  
Company

Stephen H. Howell  
Senior Vice President

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

October 31, 1979  
Howe-285-79

POOR ORIGINAL

Mr J G Keppler, Regional Director  
Office of Inspection and Enforcement  
US Nuclear Regulatory Commission  
Region III  
799 Roosevelt Road  
Glen Ellyn, IL 60137

MIDLAND NUCLEAR PLANT -  
INSPECTION REPORT NO 50-329/79-19 AND NO 50-330/79-19

This letter with Enclosures "A" and "B", is a response to your letter of October 10, 1979 which transmitted the subject Inspection Report, and also requested our written statements in reply to certain items of noncompliance.

WRB/lr

- Enclosures: A - Consumers Power Company's Response to Inspection Report  
Item No 50-329/79-19-01 and No 50-330/79-19-01
- B - Consumers Power Company's Response to Inspection Report  
Item No 50-329/79-19-02 and No 50-330/79-19-02

1539 304

NOV 5 1979

7912120

180

CONSUMERS POWER COMPANY RESPONSE

TO THE NOTICE OF VIOLATION

DESCRIBED IN NRC INSPECTION REPORT

NO. 50-329/79-19-01 AND NO. 50-330/79-19-01

POOR ORIGINAL

- A. QUALIFICATIONS OF INSPECTION PERSONNEL PERFORMING MEASUREMENTS, TESTS, AND EXAMINATIONS OF CONTAINMENT PRESTRESSING SYSTEM. (329/79-19-01; 330/79-19-01)

Description of Noncompliance

Appendix A of Report No. 50-329/79-19 and 50-330/79-19 provides the following:

"10 CFR 50, Appendix B, Criterion II requires, in part, that the quality assurance program provide for indoctrination and training of personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained.

CPCO Quality Assurance Program Policy No. 2 complies with the requirements of Regulatory Guide 1.58 and ANSI N45.2.6, 'Qualification of Inspection, Examination, and Testing Personnel for the Construction Phase of Nuclear Power Plants'. In addition, the licensee's contractor, Bechtel Power Corporation, procedure G-8.1, section 5.2, requires specific education and experience requirements to be satisfied to be considered for certification as a Level I inspector. Those requirements include: Two years related experience or high school graduate plus one year related experience or college level work leading to associates degree in related discipline plus six months of related experience in equivalent testing, examination or inspection activities associated with power plants, heavy industrial facilities or other similar facilities.

Contrary to the above, five QC inspection personnel performing measurements, tests and examination of the containment prestressing system were not qualified in accordance with the above prerequisites in that they had no prior related education nor prior related work experience in equivalent testing or inspection activities."

CPCo Response

The Bechtel Program for the certification of Construction Quality Control Personnel (SF/PSP G-8.1) meets the requirements of ANSI N45.2.6 and Regulatory Guide 1.58. There is a qualifier to the specified education and experience requirements in the ANSI Standard and Reg Guide and in the Bechtel Procedure. Paragraph 5.1.2 of SF/PSP G-8.1 states:

1539 305

"The education and experience requirements specified below shall not be treated as absolute. These requirements may be altered when other factors provide reasonable assurance to the supervisor responsible for certifying a lower level candidate that the person can competently perform a particular task. These other factors shall be demonstrated by capability in a given job and/or through documented evidence of previous satisfactory performance, and completion of the proficiency evaluation requirements specified in 6.0 below."

The certifications for the inspectors in question came after sufficient training was conducted for them in the limited area for which they have inspection responsibility. Their training records have been updated to accurately reflect their actual training. Contrary to the I&E Inspection Report which indicates that there were five inspectors doing inspection whose qualifications are in question, only four inspectors were certified. The fifth individual, who was not certified, performed no inspections.

The results of an extensive reinspection by other Bechtel Civil QC personnel assigned to post tensioning, and overinspection by CPCo, substantiate the effectiveness and competency of the QC inspectors in question.

The agreements reached in the October 25, 1979 meeting in Glen Ellyn, and documented by the attached letter, should provide final resolution of this subject.

POOR ORIGINAL

1539 306

## Bechtel Power Corporation

777 East Eisenhower Parkway  
Ann Arbor, Michigan

Mail Address: P.O. Box 1000, Ann Arbor, Michigan 48106



OCT 26 1979

QUALITY ASSURANCE

October 26, 1979

BLC- 8361

Mr. G. S. Keeley  
Project Manager  
Consumers Power Company  
1945 West Parnall Road  
Jackson, Michigan 49201

**POOR ORIGINAL**

Midland Units 1 and 2  
Consumers Power Company  
Bechtel Job 7220  
TENDON INSPECTORS  
File 0629

Dear Mr. Keeley:

Attached are action items resulting as part of resolution achieved between Bechtel, Consumers Power and NRC Region III during the October 25 discussion of Midland Project Post-Tensioning Tendon Inspectors. As a part of the resolution NRC Region III agrees that the tendon operation will continue with the current inspectors in place.

D. R. Johnson will be on site commencing Wednesday, October 31, 1979, to prepare the test required as part of agreement point 1. Lemar Brown is presently on site acting in the capacity of the experienced individual called for as part of agreement point 2. D. R. Johnson advises me that the correlation of specific tendons to individual inspectors will be completed in order for the NRC to commence their selection and inspection activities as early as Thursday, November 1, 1979.

Accordingly, I would appreciate it if Consumers advises the NRC of the November 1 date immediately.

Please direct any questions regarding follow-up action relevant to this matter either to me or L. E. Davis.

Very truly yours,

  
John A. Rutgers  
Project Manager

JAR/kb  
Attachment  
cc: B. W. Marguglio (CPCo-Jackson)  
L. E. Davis (B-Site)

1539 307

NRC REGION III MEETING  
OCTOBER 25, 1979

001947

ACTION ITEMS

AGREEMENT POINT 1

Retesting of Inspection Personnel:

- a. Bechtel will retest all three Level II and seven Level I Inspectors involved in tendon inspection .
- b. Bechtel will submit the test to the NRC for approval prior to it's administration.
- c. The test will include a combination of written and hands-on aspects.
- d. Predetermined acceptance criteria will be established and applied.
- e. The test will be administered and results will be evaluated by a Bechtel person with prior post-tensioning experience.\*

AGREEMENT POINT 2

Commencing immediately and until satisfactory conclusion of the Retesting Period:

- a. Bechtel will have a person on site with prior post-tensioning experience.\*
- b. This person will be assigned to the QC organization and will have no other responsibility than to be actively involved in the management of the post-tensioning inspection process.
- c. The individual may cover operations on both the first and the second shift on a "split shift" basis.

1539 308

AGREEMENT POINT 3

In order to improve confidence in previously completed tendon work:

- a. The NRC will select for re-inspection tendons whose characteristics have been inspected by each of the four Level I inspectors whose qualifications originally came into question (not to exceed a total of four tendons).

\* Further clarification-A person who would qualify as Level II in accordance ANSI N45.2.6-1973.

- b. Bechtel will degrease the selected tendons and the NRC will reinspect those characteristics which can be observed without removing the tendons from the sheaths or cutting ~~81947~~ <sup>81947</sup>
- c. If possible the NRC will select tendons which, at the time the selection is made, have not been greased. If this is not possible or acceptable by the NRC, then Bechtel requests that horizontal rather than verticle tendons be selected.

The points of agreement are made without specific schedule commitment, however we suggested that items 1 and 3 proceed independently with item 3 performed as soon as possible and item one accomplished within the next 3 weeks. NRC agreed there will be no undue delay in providing inspection personnel for their involvement.

#### ATTENDEES

##### NRC REGION III

GASTON FIORELLI,  
Chief, Reactor Eng.  
& Support Branch.  
DEE HAYES,  
Chief, Eng. Support  
Section.  
RICHARD KNOP,  
Chief, Const. Projects  
Section.  
EUGENE GALLAGHER,  
Inspector  
RON COOK,  
Resident Inspector  
TOM VANDELL  
DARL HOOD,  
Project Manager, NRR  
WALT HAAS,  
QA Branch-NRR  
JOHN GILARY,  
QA Branch-NRR

##### CONSUMERS POWER CO.

STEVE HOWELL,  
Senior Vice President.  
GIL KEELEY,  
Project Manager  
BEN MARGUGLIO,  
Director, Quality  
Assurance, PE&C.

##### BECHTEL

HOWARD WAHL,  
Vice President  
JOHN RUTGERS,  
Project Manager  
TED JOHNSON,  
Chief Civil Engineer  
DON JOHNSON,  
Chief Construction OC  
Engineer, San Francisco  
Power Division.

1539 309



POOR ORIGINAL

Enclosure B to  
Howe-285-79

CONSUMERS POWER COMPANY RESPONSE

TO THE NOTICE OF VIOLATION

DESCRIBED IN NRC INSPECTION REPORT

NO. 50-329/79-19-02 AND NO. 50-330/79-19-02

B. USE OF LEAN CONCRETE AS A SUBSTITUTE FOR SAFETY RELATED STRUCTURAL BACKFILL. (329/79-19-02; 330/79-19-02)

Description of Noncompliance

Appendix A of Report No 50-329/79-19 and 50-330/79-19 provides the following:

"10 CFR 50, Appendix B, Criterion III requires, in part, that appropriate quality standards are specified and included in design documents and that deviations from such standards are controlled.

CPCO Quality Assurance Program Policy No. 3 states, in part, that 'the assigned lead design group or organization assures that the design and material are suitable and that they comply with design criteria and regulatory requirements.'

Contrary to the above, Specification C-211, sections 8.1.2 and 8.2.4 permits the use of lean concrete as a substitute of safety-related structural backfill and compacted sand material while stating that 'lean concrete shall be made of non-Q material and workmanship.' This permits the use and installation of non-Q (non-safety related) material in safety-related areas without benefit of the licensee's quality assurance program. Non-Q (non-quality) lean concrete has been used in various areas of the plant fill including observed areas in the safety-related tank farm area."

CPCo Response

It is our evaluation that lean concrete used as structural backfill has been batched using Q materials except for one instance where another source was utilized. Concrete cylinder tests were taken which substantiated the quality of the concrete. In many instances, concrete used in lieu of structural backfill materials is in fact excess Q concrete residual to other pours.

When lean concrete is specifically batched for use in lieu of structural backfill materials, the materials (cement, sand and aggregate) are Q materials. As indicated in Specification C-211, lean concrete is batched and controlled in accordance with Specification C-230.

1539 310

**POOR ORIGINAL**Enclosure B to  
Howe-285-79

Lean concrete is used in lieu of structural backfill materials when approved by the onsite geotechnical soils engineer. The use of lean concrete provides a strength approximately 100 times greater than compacted structural backfill material. The minimum strength of lean concrete is 2000 PSI, (288 KSF) as compared to compacted structural backfill material which has a strength of approximately 3 KSF.

Placing and testing of lean concrete has been under the direction of concrete field engineers.

It is our opinion that any further controls would not add to the quality of the end product as can readily be seen from the above. The strength of the lean concrete backfill could not possibly be less than compacted fill.

1539 311