

01/22/82

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

CONSUMERS POWER COMPANY

(Midland Plant, Units 1 and 2)

}
}
} Docket Nos. 50-329 OM & OL
50-330 OM & OL

TESTIMONY OF RONALD N. GARDNER CONCERNING
THE QUALIFICATIONS OF BECHTEL QC PERSONNEL

Q. Please state your name and position with the NRC.

A. My name is Ronald N. Gardner. I am a Reactor Inspector
(Electrical), Plant System Sections, Region III.

Q. Is a statement of your professional qualifications attached to
your testimony?

A. Yes.

Q. What is the purpose of this testimony?

A. This testimony discusses an item from the May 1981 inspection
which still remains open. (Inspection Report No. 81-12--Staff
Exhibit I). CPC QA engineers had been performing "overinspections" of
items which Bechtel QC personnel had been inspecting. In the May 1981
inspection, the Region III inspectors observed that the QA engineers had
been identifying numerous occasions in which QC inspectors were accepting
nonconforming conditions. The QA engineers documented these instances
in nonconformance reports. (NCR's). The construction activities

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PDR FOIA
RICE84-96

PDR

primarily responsible for generating NCR's were cable pulling and cable terminations.

The Region III inspectors at the May 1981 inspection observed two potential deficiencies with the experience and training of the QC inspectors. First, they had little or no prior QC experience. Second, they were certified as cable pulling and cable termination inspectors within three weeks of their reporting date.

From October 6 to October 9, 1981, the NRC Staff conducted another inspection of the Midland site. (Inspection Report No. 81-20). They determined that the item still remained open.

Q. Please state your involvement with the inspection of this matter.

A. As a member of the Region III inspection team, I was personally involved in the May 1981 inspection. I was also a co-author of Section IV of Inspection Report 81-12, which addressed this matter.

Q. As a result of the Region III inspectors' concerns with respect to the qualifications of QC personnel, what action did they take?

A. We required CPC to (1) determine if previous inspections performed by the aforementioned QC inspectors were acceptable and (2) verify the adequacy of the training, qualifications and examination of Bechtel QC personnel.

Q. What action has CPC taken to meet the above requirements?

A. The licensee has conducted two audits of the Bechtel QC Department. Audit No. M-01-24-1 was conducted from June 2 to July 3, 1981 and Audit No. M-01-72-1 was conducted from November 2 to November 6,

1981. These audits evaluated the adequacy of the Bechtel QC training and certification program. As a result of the audits, the following improvements have been made in the area of QC training; (1) Bechtel is now documenting on the job training as part of its certification/training process for QC inspectors and (2) MPQAD site personnel are overseeing Bechtel's training/certification program to assure that the certification of inspectors meets Midland Project requirements.

Q. What has the Staff done to assure itself that Bechtel's QC training and certification program is now acceptable?

A. I selected three QC inspectors to be questioned concerning two Quality Control Instructions (QCI's) for which they had previously been certified. Both QCI's involved cable pulling and cable termination, the construction activities in which the greatest number of NCR's occurred. The selected QC inspectors were each hired in 1981, had no prior QC experience and were certified within approximately three months of their reporting date. In answering my questions, the QC inspectors demonstrated acceptable knowledge in the two areas.

Q. Do you believe that there is a need at the Midland site to require higher standards than are set forth in Regulatory Guide 1.58 which incorporates ANSI standard N45.2.6?

A. No. Although problems have arisen due to the vagueness of the regulatory guide, I do not believe the licensee has abused these provisions. Since Bechtel is now documenting on-the-job training as part of its certification/training program and MPQAD site personnel are overseeing the program, prior problems should now be alleviated. These

changes should also enable the NRC to conduct a better audit of CPC's use of these provisions.

Q. Are you satisfied that certification of OC inspectors meets Midland Project requirements and NRC requirements?

A. Yes.

Q. What is the status of CPC's commitment to "overinspect" the inspections performed by OC personnel against whom NCR's had been initiated?

A. We are waiting for the results of the overinspection so they may be evaluated. I expect to make that evaluation prior to testifying in the first week of February 1982.

Dated at Bethesda, Maryland
this 22nd day of January, 1982

PROFESSIONAL QUALIFICATIONS OF RONALD N. GARDNER

I am a Reactor Inspector (Electrical), Plant Systems Section, Region III. I have been with the NRC since October 20, 1980.

Previously I have served 1½ years as a termination engineer at a commercial nuclear plant, 3 years as a Systems Engineer involved in the construction of commercial nuclear plants. I was also associated with the overhaul of nuclear submarines for 1 year and was an Electrical Test Engineer involved in the construction of naval nuclear plants for 3½ years.

I received a B.S. in Electrical Engineering from Virginia Polytechnic Institute.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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In the Matter of

CONSUMERS POWER COMPANY

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}
Docket Nos. 50-329 OM & OL
50-330 OM & OL

CERTIFICATE OF SERVICE

I hereby certify that copies of "TESTIMONY OF RONALD N. GARDNER CONCERNING THE QUALIFICATIONS OF BECHTEL QC PERSONNEL" and "PROFESSIONAL QUALIFICATIONS OF RONALD N. GARDNER" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class or as indicated by an asterisk by deposit in the Nuclear Regulatory Commission internal mail system, this 22nd day of January, 1982:

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U.S. Nuclear Regulatory Commission
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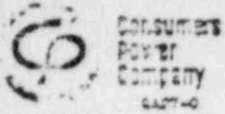
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U.S. Nuclear Regulatory Commission
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2120 Carter Avenue
St. Paul, MN 55108



Michael N. Wilcove
Counsel for NRC Staff



NONCONFORMANCE REPORT

Priority: 5 Trend Code: B-3 AI S-685 PAGE 1 OF 2

4. PROJECT NAME: Midland 1 & 2	7. NONCONFORMING PART NO: OAY 3307 B	8. NONCONFORMING PART NAME: Electrical Cable	1. NCR SERIAL NO: N-01-6-014
9. SERIAL NUMBER: N/A	10. ORG. CONTRACTING NO: Bechtel QC	11. AREA, LOC. OF NO: 614' Elevation	2. DATE: 2/27/81
12. AS IS NONCONFORMING CONDITION READS AS REQUIRED CONDITION WITH NOTE: Bechtel Quality Control Instruction No 7220/E-4.0 Activity 2.6 states, "Verify that the cable is installed in the correct vias as specified on the scheme card." Contrary to the above, cable OAY3307B was found incorrectly routed through conduit AJB015 instead of AJB045 as required by Drawing E-37 and as indicated on Inspection Record OAY3307B. This deficiency was discovered as a result of an overinspection of completed CWR 1-PBA-E-0080, as required by Project Inspection Plan and Report "G-2, "Universal Inspection Plan." This is a QC inspection miss.			3. DATE OF REV: N/A 4. FILE NO: 16.3.6
13. QA RECOMMENDATION FOR PART CA: Reroute cable OAY3307B through the correct vias.			5. DISTRIBUTION ACTION COPY: REMcGue INFO COPY: WRBird JWCook TCCooke(2) MADietrich JFFirlit GSKeeley BwMarguglio DBMiller JARutgers MPQAD Routing SKT/CAC ESmith
DESIGN/PROJECT ENG. DISPOSITION REQUIRED <input checked="" type="checkbox"/> NOT REQUIRED <input type="checkbox"/>			
14. HOLD TAGS APPLIED: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NUMBER, LOCATION & TYPE OF HOLD TAG APPLIED: _____			
15. IS PROCESS CA REQUIRED: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IF NO, ENTER JUSTIFICATION BELOW: _____			
16. DOES NC AFFECT Q-LIST ITEM: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		17. IS NC REPORTABLE PER 50.55(e): YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
18. IS NC REPORTABLE PER PART 21: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		19. IF YES, DATE & TIME OF REPORT TO MNC: N/A	
20. IF YES, WHO MADE REPORT TO MNC: N/A		21. IF YES, NAME OF MNC OFFICIAL TO WHOM REPORTED: N/A	
22. NCR ORIGINATED BY: <i>N. Talt</i>		23. WRITTEN REPLY REQUIRED BY: 3/16/81 TO ESTABLISH CA COMPLETION DATE	24. SUPERVISOR'S SIGNATURE/DATE: <i>DR Keating 2-28-81</i>
25. PART CA DISPOSITION, JUSTIFICATION & COMPLETION DATE: 1. Where was QC? 2. What was Inspector's name? 3. What are his qualifications? 4. How many more NCRs like this? 5. What corrective action taken?			
26. DESIGN/PROJECT SIG. AUTH. DISP.:	27. PMO SIG. AUTH. DISP.:	28. PROCUREMENT SIG. CONC. DISP.:	29. SIG. OF ORG. RESP. FOR C/A:
	N/A	N/A	
30. FAB/CONTR. SIG. AUTH. DISP.:	31. SIG. OF TEST GROUP ACKNOW. CONDITION:	32. FOR MAJOR MOD - FLD. SUPE. SIG. AUTH. DISP.:	33. QA AUTH. SIG. TO IMPLEMENT DISP.:
	N/A	N/A	
34. METHOD OF PART CA VERIFICATION:			
35. SIG. OF ORG. RESP. FOR PART C/A SIGNIFYING COMPLETION:		36. SIG. VERIFYING PART C/A & HOLD TAG REMOVAL/DATE:	37. NCR CLOSED BY DATE: (PART & PROCESS CA COMPLETE)



Constellation
Power
Company

NONCONFORMANCE REPORT

PROCESS CORRECTIVE ACTION

PROJECTS, ENGINEERING AND CONSTRUCTION -
QUALITY ASSURANCE DEPARTMENT

NCR SERIAL NUMBER: 01-0-1-0

PAGE 2 OF 2

18. QA ASSESSMENT OF ROOT CAUSES:

Bechtel QC inspector did not verify cable installation as required by Quality Control Instruction.

19. ACTUAL ROOT CAUSES, IF DIFFERENT FROM ABOVE (TO BE COMPLETED BY ORG. RESPONSIBLE FOR PROCESS CA):

40. PROCESS CA DERIVED FROM:

DESIGN

FABRICATION

CONSTRUCTION

PROCUREMENT

INSPECTION

OTHER

41. QA RECOMMENDATION FOR PROCESS CA:

Recertify Quality Control Inspector to Quality Control Instruction 7220/E-4.0.

Reinstruct QC Inspectors involved in cable pulling to the requirements of QCI 7220/E-4.0 and provide documented evidence of this instruction.

42. PROCESS CA TO BE TAKEN BY ORG(S) CHECKED IN BLOCK 41 & DATE OF COMPLETION:

43. METHOD OF PROCESS CA VERIFICATION:

44. SIG. OF ORG. RESPONSIBLE FOR PROCESS CA SIGNIFYING COMPLETION:

45. PROCESS CA COMPLETION VERIFIED BY, DATE:



Consumers
Power
Company
QA-7-0

NONCONFORMANCE REPORT

JECTS, ENGINEERING AND CONSTRUCTION -
QUALITY ASSURANCE DEPARTMENT

Priority: 5 Trend: B-3 AI: S 750 Start Up System: LEAD

PAGE 1 OF 3

6. PROJECT NAME: Midland 1 & 2		7. NONCONFORMING PART NO: LBB 2428 D		8. NONCONFORMING PART NAME: Electrical Cable		1. NCR REFERENCE NO: N-OT-6-1-026	
9. SERIAL NUMBER: N/A		10. ORG. COMMITTING NO: Bechtel Construction Bechtel QC		11. AREA/LOC. OF NC: Upper Spreader Room & 659' elevation		2. DATE: 4-21-81	
12. "AS IS" NONCONFORMING CONDITION VERSUS "AS REQUIRED" CONDITION WITH REFS: Bechtel Power Corporation procedure FPE 4.000 Rev 2 Para 6.3 states: "In horizontal runs, cables shall be neatly trained and tied down where necessary." Bechtel PQCI E-4.0 Rev 6, activities 2.5, 2.6 and 3.2 require verification that the cable is protected from physical damage, installed in the correct vias and is neatly trained within the cable tray. (continued on page 3)		13. QA RECOMMENDATION FOR PART CA: Route Cable LBB 2428 D neatly into the correct vias, tie down as required and protect from physical damage. (L E Davis)		5. DISSEMINATION ACTION COPY: LEDavis ESmith INFO COPY: WRBird GKWandling JWcook MPOAD Routing TCCooke 1987/CAC <i>CAC</i> MADietrich JFFirlet GSKeeley BWMarguglio JMilandin DBMiller JARutgers DATaccart		3. DATE OF REV: N/A	
DESIGN/PROJECT ENG. DISPOSITION REQUIRED <input type="checkbox"/> NOT REQUIRED <input checked="" type="checkbox"/>		14. HOLD TAGS APPLIED: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		NUMBER, LOCATION & TYPE OF HOLD TAGS APPLIED:		15. IS PROCESS CA REQUIRED: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IF NO, ENTER JUSTIFICATION BELOW:	
16. DOES NC AFFECT Q-LIST ITEM: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		17. IS NC REPORTABLE PER 50.55(e): YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		18. IS NC REPORTABLE PER PART 21: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> <i>type</i>		19. IF YES, DATE & TIME OF REPORT TO NRC: N/A	
20. IF YES, WHO MADE REPORT TO NRC: N/A		21. IF YES, NAME OF NRC OFFICIAL TO WHOM REPORTED: N/A		22. NCR ORIGINATED BY: <i>N. J. Talt</i>		23. WRITTEN REPLY REQUIRED BY: 5-5-81 TO ESTABLISH CA COMPLETION DATE	
24. SUPERVISOR'S SIGNATURE/DATE: <i>DR Keating 4-21-81</i>		25. PART CA DISPOSITION, JUSTIFICATION & COMPLETION DATE:					
26. DESIGN/PROJECT SIG. AUTH. DISP.: N/A		27. PMO SIG. AUTH. DISP.: N/A		28. PROCUREMENT SIG. CONC. DISP.: N/A		29. SIG. OF ORG. RESP. FOR C/A:	
30. FAB/CONST. SIG. AUTH. EXP. DISP.: N/A		31. SIG. OF TEST GROUP ACKNOW. CONDITION: N/A		32. FOR MAJOR MOD - PLS. SUPT. SIG. AUTH. DISP.: N/A		33. QA AUTH. SIG. TO DOCUMENT DISP.:	
34. METHOD OF PART CA VERIFICATION:							
35. SIG. OF ORG. RESP. FOR PART C/A SIGNIFYING COMPLETION:		36. SIG. VERIFYING PART C/A & HOLD TAG REMOVAL/DATE:		37. NCR CLOSED BY/DATE: (PART & PROCESS CA COMPLETE)			



Consumers
Power
Company

NONCONFORMANCE REPORT

PROCESS CORRECTIVE ACTION

PROJECTS, ENGINEERING AND CONSTRUCTION
QUALITY ASSURANCE DEPARTMENT

NCR SERIAL NUMBER: _____

PAGE 2 OF 3

38. QA ASSESSMENT OF ROOT CAUSE(S):

Construction did not follow the requirements of FPE 4.000.
Bechtel QCE was inattentive in the inspection of this cable pull.

39. ACTUAL ROOT CAUSE(S), IF DIFFERENT FROM ABOVE (TO BE COMPLETED BY ORG. RESPONSIBLE FOR PROCESS CA):

40. PROCESS CA REQUIRED FROM:

DESIGN

FABRICATION

CONSTRUCTION

PROCUREMENT

INSPECTION

OTHER _____

41. QA RECOMMENDATION FOR PROCESS CA:

- 1) Determine why this cable pull was not installed properly.
- 2) Review FPE 4.000 "Installation of Electrical Cables", with crew responsible for this pull. 1) & 2) L E Davis
- 3) Determine why QCE was remiss in his inspection.
- 4) Recertify the QCE to PQCE E-4.0 3) & 4) E Smith

42. PROCESS CA TO BE TAKEN BY ORG(S) CHECKED IN BLOCK 41 & DATE OF COMPLETION:

43. METHOD OF PROCESS CA VERIFICATION:

44. SIG. OF ORG. RESPONSIBLE FOR PROCESS CA SIGNIFYING COMPLETION:

45. PROCESS CA COMPLETION VERIFIED BY/DATE:

Continued:

12) "As is" nonconforming condition versus "as required" condition with refs:

Contrary to the above, during an overinspection of Cable #LBB 2428 D the following deficiencies were noted:

- (a) Cable was routed into cable tray BFC instead of BFH as required by Drawing E-37 and the cable pull card.
- (b) Cable was outside of horizontal tray BFF 13 rather than neatly trained and tied inside.
- (c) Cable crossed over split tray barrier and into tray BTG 01 at junction box BJ 470.
- (d) Cable was not protected from physical damage (sharp edges).

REQUEST FOR FURTHER RESPONSE

ACTION ITEM NO S-750

TO <i>J.E. Davis</i>		DEPT <i>Construction</i>	COMPANY <i>Bechtel Power Corp.</i>	
ACTION ITEM <i>NCR M-11-9-1-026</i>		DATE <i>4-21-81</i>	FILE <i>16.3.4/16.3.6</i>	
RESPONSE DATE <i>5-5-81</i>	TO-DAY'S DATE <i>5-13-81</i>	EVALUATOR <i>N. Nott</i>		PHONE NO <i>X-536</i>

EVALUATION OF EARLIER RESPONSE *The conditions reported in this NCR were previously noted by MPCA D during an overinspection; were subsequently reported to Bechtel QC who along with Field Engineering immediately took corrective action. Process Corrective Action does not explain how new or inadequately trained personnel are going to be prepared for future job assignments so that there is no recurrence of the reported condition.*

ADDITIONAL DATA/ACTION REQUIRED *What action is going to be taken to adequately train new or inadequately trained personnel for future job assignments?*

DISTRIBUTION
 ADDRESSEE
 DB MILLER
 WR BIRD
 DM TURNBULL
 ORIGINATOR
 SUBJECT FILE
 TICKLER

- DISCUSSED WITH _____ ON (DATE) _____
- NEXT REPLY AGREED TO BY (DATE) _____
- PLEASE REPLY BY (DATE) 5/27/81 GIVING DATE BY WHICH NEXT REPLY CAN BE EXPECTED.

SIGNATURE *N. Nott* DATE 5-13-81 PHONE X-536



Consumer Power Company

NONCONFORMANCE REPORT

PROJECTS, ENGINEERING AND CONSTRUCTION - QUALITY ASSURANCE DEPARTMENT

Priority: 9 Trend: B-3 AT: S-600 Start Up System: ODMW PAGE 1 OF 1

6. PROJECT NAME: Midland 1 & 2	7. NONCONFORMING PART NO: OBB6807 C-1 OBB6807 E-1	8. NONCONFORMING PART NAME: Cable Terminations	1. NCR SERIAL NO. M-FI-01-014
9. SERIAL NUMBER: N/A	10. ORG. CONTRACTING NO: Bechtel Construction Bechtel OC	11. AREA/LOC. OF NO: Control Room Panel 2C15	2. DATE: 03/24/81
			3. DATE OF REV: NA
			4. FILE NO: 14 2 4 8 16 3 A

12. AS IS' NONCONFORMING CONDITION VERSUS 'AS REQUIRED' CONDITION WITH REFS:
 Bechtel Field Procedure FPE-7.000, Rev 7, paragraph 6.6, states in part: "The stripping back of the outer jacket of a cable shall not be more than necessary for the individual conductors to reach their points of connection."
 Contrary to the above, cable OBB6807 C-1 was stripped back 3 1/4" from its closest point of connection and OBB6807 E-1 was stripped back 4 1/2" from its closest point of connection.
These terminations had been accepted by Bechtel Quality Control.

5. DISTRIBUTION ACTION COPY:
 ESmith
 LEDavis
- INFO COPY:
 WRBird
 JWCook
 TCCooke(2)
 MADietrich
 JFFirlit
 GSKealey
 BWMarguglio
 JMilandin
 DBMiller
 JARutgers
 DATaggart
- GFMandin
 JAW/Cat
 MPQAD Rou

13. QA RECOMMENDATION FOR PART CA:
 Use as is: Although this condition exceeds the requirements of the Field Procedure, the excess amount in this case does not warrant re-work as it is not detrimental to safe plant operation.

DESIGN/PROJECT ENG. DISPOSITION REQUIRED NOT REQUIRED

14. HOLD TAGS APPLIED: YES NO NUMBER, LOCATION & TYPE OF HOLD TAG APPLIED: _____

15. IS PROCESS CA REQUIRED: YES NO IF NO, ENTER JUSTIFICATION BELOW: _____

16. DOES NC AFFECT Q-LIST ITEM: YES NO 17. IS NC REPORTABLE PER 50.55(*): YES NO

18. IS NC REPORTABLE PER PART 21: YES NO 19. IF YES, DATE & TIME OF REPORT TO NRC: N/A

20. IF YES, WHO MADE REPORT TO NRC: N/A 21. IF YES, NAME OF NRC OFFICIAL TO WHOM REPORTED: N/A

22. NCR ORIGINATED BY: *W. J. Tatt* 23. WRITTEN REPLY REQUIRED BY: 04/07/81 TO ESTABLISH CA COMPLETION DATE 24. SUPERVISOR'S SIGNATURE/DATE: *DR Keating 3-24-81*

25. PART CA DISPOSITION, JUSTIFICATION & COMPLETION DATE:

26. DESIGN/PROJECT SIG. AUTH. DISP.: N/A	27. PMO SIG. AUTH. DISP.: N/A	28. PROCUREMENT SIG. CONC. DISP.: N/A	29. SIG. OF GRD. REPT. FOR C/A:
30. FAB/CONST. SIG. AUTH. DIS. DISP.: N/A	31. SIG. OF TEST GROUP ACKNOW. CONDITION: N/A	32. FOR MAJOR MCD - PLS. SUPT. SIG. AUTH. DISP.: N/A	33. QA AUTH. SIG. TO IMPLEMENT DISP.

34. METHOD OF PART CA VERIFICATION:

35. SIG. OF ORG. REPT. FOR PART C/A SIGNIFYING COMPLETION: _____ 36. SIG. VERIFYING PART C/A & HOLD TAG REMOVAL/DATE: _____ 37. NCR CLOSED BY/DATE: (PART & PROJECT CA COMPLETE)



NONCONFORMANCE REPORT

PROCESS CORRECTIVE ACTION

PROJECTS, ENGINEERING AND CONSTRUCTION -
QUALITY ASSURANCE DEPARTMENT

NCR SERIAL NUMBER NY-02-040

PAGE 2 OF 2

38. CA ASSESSMENT OF ROOT CAUSE(S):

Termination electrician stripped the cables back too far when terminating the cables.

39. ACTUAL ROOT CAUSE(S), IF DIFFERENT FROM ABOVE (TO BE COMPLETED BY ORG. RESPONSIBLE FOR PROCESS CA):

40. PROCESS CA DERIVED FROM:

DESIGN

FABRICATION

CONSTRUCTION

PROCUREMENT

INSPECTION

OTHER _____

41. QA RECOMMENDATION FOR PROCESS CA:

Instruct Termination crews on requirements for stripping back cable. (LE Davis)
Reinstruct QC Engineers on termination requirements and provide documented evidence of instruction. (E Smith)

42. PROCESS CA TO BE TAKEN BY ORG(S) CHECKED IN BLOCK 41 & DATE OF COMPLETION:

43. METHOD OF PROCESS CA VERIFICATION:

44. SIG. OF ORG. RESPONSIBLE FOR PROCESS CA SIGNIFYING COMPLETION:

45. PROCESS CA COMPLETION VERIFIED BY/DATE:

*Applicants
findings*

-172-

275 III

275-277

NRC Inspection Reports 79-10, 79-19

275. NRC Inspection Report 79-10 covered an inspection conducted in May 1979.^{694/} In the report Mr. Gallagher, one of the inspectors, indicates a dissatisfaction with the ANSI qualifications of quality control personnel in the area of containment post-tensioning.^{695/} He did not issue a non-compliance concerning the matter. ANSI, the American National Standards Institute, comprises committees which represent experts in particular engineering areas.^{696/} The committees set industry-wide standards for a particular discipline.^{697/} Mr. Gallagher is not a member of any ANSI Committee.^{698/} Mr. Gallagher testified that, in the technical judgment of Consumers Power, the post-tensioning inspectors were qualified under applicable ANSI standards, but that he disagreed with this analysis.^{699/} In September 1979 Consumers Power management and Mr. Gallagher met to resolve this difference.^{700/} The NRC is not satisfied with the inspector's qualifications.^{701/}

^{694/} Gallagher, Tr. 2427-28.

^{695/} Id.; Stamiris Exhibit No. 3, Attachment No. 10.

^{696/} Gallagher, Tr. 2458.

^{697/} Id.

^{698/} Id.

^{699/} Gallagher, Tr. 2460.

^{700/} Gallagher, Tr. 2428.

^{701/} Gallagher, Tr. 2428.

*Ron - part of
Applicants
findings*

DEC 14 1981

276. The question of quality control inspector qualifications also arose in the context of the planned remedial work on soils.^{702/} Mr. Gallagher expressed the view that Consumers Power, as well as other nuclear construction permit holders, have misused an exception in an ANSI standard (ANSI N.45.2.6).^{703/} He opposes the exception in the standard which permits the substitution of certain educational or experiential requirements for inspectors if an equivalent level of competence can be demonstrated.^{704/} In Mr. Gallagher's opinion, the debate over qualification of quality assurance personnel is "the biggest problem facing our industry today."^{705/} It was not peculiar to the Midland site, but endemic to the industry.^{706/} Mr. Cordell Williams, the chief inspector for Region III in the civil area,^{707/} disagrees with Mr. Gallagher's assessment of the ANSI waiver provision.^{708/} He believes the flexibility it provides is necessary.^{709/}

^{702/} Gallagher, Tr. 2432.

^{703/} Id.; Gallagher, Tr. 2460.

^{704/} Gallagher, Tr. 2432.

^{705/} Gallagher, Tr. 2433.

^{706/} Gallagher, Tr. 2433.

^{707/} Williams, Tr. 2197-98.

^{708/} Williams, Tr. 2207.

^{709/} Id.

277. According to Mr. Marguglio, the Midland quality control and quality assurance inspectors are well qualified.^{710/} For example, as a part of the recent improvements in the MPQAD quality assurance program, quality control inspectors are required to be certified on particular inspection plans, a requirement in excess of ANSI standards.^{711/} John Gilray, from the NRC Staff, cited these upgraded qualifications in his affirmative assessment of Midland's quality assurance program.^{712/} In the recent MAC audit, qualifications of both Bechtel and Consumers Power inspectors were reviewed.^{713/} The auditors found the inspectors properly qualified for the tasks to which they are certified.^{714/}

278. Mr. Williams testified that the number of persons presently on the Midland civil quality assurance staff is adequate.^{715/} However, for some of the planned remedial work, differently qualified personnel may be necessary.^{716/} Consumers Power is aware of this and has pledged to acquire such persons as a condition precedent to the remedial work.^{717/}

^{710/} Marguglio, Tr. 1529.

^{711/} Marguglio, prepared testimony at p. 32, following Tr. 1424.

^{712/} Gilray, Tr. 3713.

^{713/} Staff Exhibit No. 4, at p. 10.

^{714/} Id.

^{715/} Williams, Tr. 2216.

^{716/} Id.

^{717/} Marguglio, Tr. 1529.

229. Another adverse finding of the May 1981 inspection involved the qualification of personnel doing first-line inspection. Tr. 2202-03. It appeared to the Staff that quality control personnel did not have adequate experience for quality control inspection. Tr. 2202. CPC's own records also demonstrated NRC's basis for this concern. Tr. 2203. Staff witness Cordell Williams testified that NRC discovered certain failures of the sort that an experienced quality inspector would not make. Tr. 2206. He recognized that the ANSI Standard N45.2.6, which is recognized by the NRC Regulatory Guide 1.58, allows a fairly liberal interpretation concerning the qualifications of inspectors. Tr. 2206. The NRC questioned the extent to which CPC is applying the ANSI Standard. Tr. 2206. Mr. Williams later testified, however, that the NRC's concerns about the adequacy of experience and education of QC and QA personnel arising out of the May 1981 inspection is one that has been addressed at nearly all plants and that the problems are no worse at Midland than they are at other plants. Tr. 2212.

230. Staff witness Gallagher criticized the industries' standards for qualification and experience of inspection and testing personnel as permitting too much latitude in provisions for waiving educational and experience requirements. Tr. 2432. He testified that the provision of the industries' standard addressing waiver of requirements is in his opinion abused not only at the Midland site but also at a number of other sites where the issue has been raised. Tr. 2432.

231. On cross-examination by CPC, Mr. Gallagher agreed that the American National Standards Institute is comprised of committees which are representative of collections of experts and that their purpose is to derive

Row - from NRC proposed findings

industry-wide standards for particular disciplines. Tr. 2458-9.

Mr. Gallagher acknowledged that the committee responsible for ASNI Standard N45.2.6 has discussed, debated and given consideration to modifying the standard but as yet they have not done so. Tr. 2460.

232. We asked Staff witness Gilray his views concerning the waiver provisions of the ANSI Standard. Mr. Gilray testified that he thinks the flexibility permitted by the waiver provisions needs to be there to certify and qualify an individual that does not have high school or graduate education. Tr. 3845-46. He stated that whenever the waiver provisions are used there should be documented justification as to what proficiency tests or qualification tests the individual went through. Tr. 3846. He further stated that the sort of documentation required is presently being studied by the NRC. Tr. 3846.

233. The testimony in this proceeding demonstrates certain problems that arise from the lack of definitive standards for waiving the education and experience requirements of ASNI Standard N45.2.6 for QA inspection personnel. In light of testimony that these problems have been addressed by the appropriate committee of the American National Standards Institute and the NRC and that no changes have resulted to date this Board does not believe it appropriate for it to undertake corrective action in that regard.

234. Another subject within quality assurance on which there was extensive cross-examination concerned the effect of the Midland Project Quality Assurance Department (MPOAD)--the new integrated organization described by Mr. Marguglio in his direct testimony. Marguglio, p. 4, et seq. In response to Intervenor cross-examination Mr. Marguglio testified that

PROFESSIONAL QUALIFICATIONS OF RONALD W. GARDNER.

I am a Reactor Inspector (Electrical), Plant Systems Section, Region III. I have been with the NRC since October 20, 1980.

Previously I have served 1½ years as a termination engineer at a commercial nuclear plant, 3 years as a Systems Engineer involved in the construction of commercial nuclear plants. I was also associated with the overhaul of nuclear submarines for 1 year and was an Electrical Test Engineer involved in the construction of naval nuclear plants for 3½ years.

I received a B.S. in Electrical Engineering from Virginia Polytechnic Institute.

N-plant cable errors found

By PAUL RAU
Daily News staff writer

A 5.6 percent error rate in routing electrical cables has been found among work previously inspected by nine Quality Control (QC) electrical inspectors at the Midland nuclear plant, a Nuclear Regulatory Commission official testified Friday in Midland.

One of the nine had an error rate of 3.3 percent, and the NRC is requesting that 100 percent of that man's electrical inspections be re-inspected by Consumers Power Co. Quality Assurance (QA) personnel, according to Ronald N. Gardner, an electrical inspector from the NRC's Region III office in Illinois.

Consumers "has not, at this time, agreed to do this. It may end up being a requirement," Gardner told a panel of administrative judges from the Atomic Safety and Licensing Board, which is presiding over the federal hearing on soil problems at the Midland nuclear plant.

An NRC inspection at the plant last May determined that Bechtel Power Corp. QC inspectors were approving electrical work that should have been

rejected because it was done improperly.

A follow-up NRC inspection in October 1981 revealed the situation was continuing and that some Bechtel QC inspectors had "little or no prior QC experience." Some were certified as inspectors within three weeks of reporting for work, according to Gardner's written testimony.

THE NRC THEN required Consumers to audit the work and qualifications of electrical inspectors in the Bechtel QC department. Two audits were done. Friday, Gardner informed the ASLB of the results and of an on-going examination of work inspected by the nine men in particular.

He told the ASLB that the nine were selected for scrutiny because non-conformance reports had been written against them by Consumers as a result of the audits.

Of 1,084 cable installations previously inspected by the nine, 61 cables were found to be misrouted, a 5.6 percent error rate, Gardner testified.

Nearly half the misrouted cables were found in work inspected by one of the QC inspectors, who no longer works for Bechtel, Gardner said. Reinspection of 500 of this man's inspections revealed 30 misrouted cables, and the NRC asked that all of the 1,147 inspections done by the man be reviewed for their adequacy.

Even if the misrouted cables had not been found in the audits, they would have been detected and corrected without damage to plant systems during pre-operational tests of electrical circuitry, according to Bruce Peck, Consumers' construction superintendent at the plant.

Peck was not a witness at the soil hearing. His opinion was sought today by the Daily News.

Despite the NRC's earlier questions, Gardner said he is unable to attribute the misrouted cables to a lack of training among the QC inspectors.

Although he said three of the nine inspectors had only three weeks training prior to certification, he said there appears to be no correlation between training and errors.

Gardner noted that the inspector with the highest error rate attended both high school and college, had more than 30 years of experience and possessed a Michigan master electrician identification. "That's why I don't see a correlation between experience and errors," he said.

HE TESTIFIED that four of the nine had been certified through the waiver procedure, wherein the education and training requirements of the American National Standards Institute are substituted for experience of other sorts.

But the NRC inspector told the ASLB he finds the waiver procedure acceptable because ANSI standards are not "absolute" and because proficiency can be shown in other ways.

Gardner said that an overview of QC inspectors by QA personnel, as is being done for the Midland plant, is one way to assure the waiver process "is not abused."

He also testified that an NRC probe into allegedly deficient work by QC electrical inspectors employed by Comstock, a subcontractor at the plant, has ended because the man who made the allegations could not back his claims.

"The gentleman indicated he could not identify any lines which contained deficient installations. However, he named two people he felt were not qualified," Gardner said in answer to a question from NRC attorney Michael Wacove.

Gardner said a records examination showed the two men are qualified in two or more areas of inspection. "In

observing that the two gentlemen are certified, that's as far as we can pursue this at this time" unless more specific complaints are received, Gardner said.

IN OTHER testimony Friday, NRC witnesses said they are continuing to evaluate the need to replace underground piping at the nuclear plant.

In much of the soil hearing, Consumers and the NRC have been hammering out plans to add massive concrete supports to the foundations of several buildings which have sustained cracked walls. Those problems have been traced to the mid-1970s, when poorly compacted soils were placed in many areas at the plant.

The integrity of the underground pipes is now being questioned because they were buried in the same deficient soils.

All of the pipes being reviewed are vital to various plant safety systems; some will contain air for control room operators, some reactor coolant others fuel for the plant's diesel generators, which would be used in emergencies. The pipes vary in meter from 1.5 to 36 inches.

In written testimony, NRC officials said pipe profile tests indicate the pipes deviate from 8 to 16 inches from their intended locations. The NRC and Consumers have agreed that 3 inches of movement is the greatest acceptable over the 40-year life of the plant.

The NRC believes the loose soils allowed the pipes to sink from their intended locations, possibly over-stressing them. The concern is that "ovalization" may have occurred in the pipes' shapes, reducing their flow rates.

CONSUMERS ALREADY has raised and rebedded hundreds of feet of piping due to these concerns, according to testimony. Other pipes may be rebedded if pending tests show they exceed 4 percent ovalization.

Joseph Kane, an NRC geotechnical engineer, said the pipes will be satisfactory if they are within 2 inches of their intended locations. He said this requirement is not normal for nuclear plants under construction.

"Why we're doing it at Midland is in recognition of the soil settlement problem," Kane testified.

Kane, in a break during the hearing, said Consumers has agreed to replace—not just rebed—30- and 80-foot lengths of 36 inch pipe which lead from the reactors to the service water pump structure. These pipes carry water from the cooling pond.

Darl Hood, the NRC's project manager for the Midland plant, said these pipes need to be replaced "because of inability to prove, to the satisfaction of the (NRC) staff, that the condition of the pipe now and in the future is satisfactory."

Other NRC witnesses said that pending further analysis, some of the pipes apparently will be safe during the plant's life.

Consumers has claimed that the loose soils may not have exclusively caused the pipe settlements. Utility witnesses have said some pipes may have been placed too low originally, or that welding after placement caused them to sink.

Kane testified Friday, "I'm not sure I could ever come to that last conclusion. These (pipes) were checked when they were installed, and they were within tolerances."

Kane also said the NRC would like to avoid situations where railroad cars, used to ship fuel and other materials in and out of the plant, would be left for days over the buried pipes.

But he added, "If (a train) passed over the pipes and didn't stop, that would be no problem. And if it did that many times a day, that would still be true."

The hearing has been recessed until March 30.

Not Ar. All. when Gardner
NRC TRU

AUDIT REPORT

WRBird CACHien/KFH JWCook MADietrich GSKeeley BWMarguglio DBMiller	JARutgers AESchlaifer ESmith DATaggart JLWood MPQAD Routing RAWells	AUDIT NO: M-01-24-1
		FILE NUMBER: 18.4.3.6
		DATE OF AUDIT: June 2 - July 3, 1981
		ORGANIZATION AUDITED: Bechtel Quality Control
		PLANT & PROJECT: Midland 1 and 2
BY: <i>DR Keating</i> 7-24-81	APPROVED BY: <i>DR Keating</i> 7-24-81	

I. AUDIT SCOPE AND OBJECTIVES

The scope of the audit was training and certification of Bechtel Quality Control personnel. The purpose was to assess compliance with, and the adequacy of, the present program. It is noted that Revision 4 of PSP G-8 1 became effective during the audit. Also, an assessment was made as to how the present Bechtel QC training program meets Revision 1 of Regulatory Guide 1.58 as discussed in the NRC Generic Letter 81-01 dated May 4, 1981.

II. IDENTIFICATION OF AUDITORS

The audit was performed by the following personnel:
 DR Keating - Audit Team Leader
 AE Schlaifer - Technical Specialist

III. PERSONS CONTACTED DURING AUDIT

The following Bechtel personnel were contacted during the course of the audit:

Name	Title	Attended Entrance Meeting	Attended Exit Meeting
E Smith	Project Field Quality Control Engineer	X	X
E Urbanawiz	QC Training Coordinator	X	
S Kirker	QC Lead Services		X

IV. AUDIT SUMMARY

- A. An audit entrance meeting was held on June 2, 1981, with personnel in attendance as noted in Paragraph III. The audit team was introduced, and the audit scope, plan and schedule were discussed.
- B. Audit checklists were developed from PSP G-8.1, "Qualifications, Evaluation, Examination, Training and Certification of Construction Quality Control Personnel," Revision 3, and ANSI N45.2.6-1973. Specific sections from the documents are as noted on the checklists. Data was collected by proceeding through the checklists which are attached to the file copy of this report.

AUDIT REPORT

CONTINUATION SHEET

AUDIT NO: M-01-24-1

PAGE 2 OF 4

- C. The audit resulted in two findings which are attached to this report.
- D. The following observations were made as a result of this audit:
1. The amount of training in particular Quality Control instructions prior to certification varies considerably. No minimum training requirement was evidenced, nor was there documented evidence of credit taken for previous experience or certifications. It appears that considerable on-the-job training in QCIs is being performed that is not documented which provides an erroneous impression that training is less than actually performed. (Also reference AFR M-01-24-1-01.)
 2. Section 8.3.2 of PSP G-8.1, Revision 3, required that the effectiveness of the job site training program be evaluated by a review of the Corrective Action Log described in PSP G-3.2. There was no documentation of this review. It is noted that PSP G-8, Revision 4, deletes this requirement and that the new PSPs which went into effect on June 29, 1981, do not require the Corrective Action Log. Discussion with the PFQCE indicates that, rather than reviewing the log, he has and will continue to review the MPQA Trend program output, administer the Bechtel NCR program, and through these items and discussions with his lead QCEs, will continue to direct the training program based on the PFQCE's evaluation of its effectiveness. It is suggested that an evaluation be made of these actions and should be incorporated into PSP G-8.1.
- E. The following Unresolved Items were identified:
1. Section 4.2.1.4 of PSP G-8.1, Revision 3, indicates that Level I personnel provide on-the-job training for uncertified construction Quality Control Engineers as a job responsibility. It is considered that Level IIs should also have on-the-job training of uncertified personnel as a job responsibility. Consideration should be given to revising PSP G-8.1 to show that training uncertified QCEs is a responsibility of a Level II. M-01-24-1-01 (URI)
 2. Section 8.3.1 of PSP G-8.1, Revision 3, that discusses monthly training sessions, requires clarification. It has been construed previously that this section required that each QC engineer attend a minimum of one, one-hour training session per month. Presently, Bechtel QC considers that not to be the case. The procedure does not literally require all QCEs to attend a session. It was observed during the audit that some QCEs had not attended any training sessions during certain months and that others had attended only half-hour sessions during the month. M-01-24-1-02 (URI)

AUDIT REPORT

AUDIT NO: M-01-24-1
PAGE 3 OF 4

CONTINUATION SHEET

3. There are no set criteria available for use that provides reasonable assurance that a person can competently perform an assigned task where specific education and experience requirements are not met. There also is no basis available for determining "equivalent" experience. It is not clear that successfully completing the certification process is a satisfactory substitute for education and experience. M-01-24-1-03 (URI)
4. Section 8.5 of PSP G-6.1, Revision 5, requires, in part, that: "...the necessary training and orientation in the application and use of each new and revised PQCI..." prior to implementation in the field. It was observed that, in one case of ten reviewed, no training in the QCI was performed prior to certification (QCE VanDorne in QCI C-2.10). This training is conducted so that each CQCE responsible for performing the inspections fully understands the requirements contained in the PQCIs. There is no basis for determining whether such training is "necessary" or not. Consideration needs to be given to clarify this point. M-01-24-1-04 (URI)
- F. An audit exit meeting was held on July 3, 1981, with those in attendance as noted in Paragraph III. Draft audit findings, observations and unresolved items were presented and discussed. Bechtel Quality Control did not concur with the findings or Unresolved Item M-01-24-1-03 (URI). Discussion ensued. Based on discussion and additional information presented in the exit meeting, as well as discussions with Bechtel QC subsequent to the exit meeting, the final audit results are as presented in this report. Bechtel is requested to respond to the audit findings, observation No. 2, and the Unresolved Items.

G. Responses are to be sent to:

Mr D M Turnbull
Consumers Power Company
Midland Project Quality Assurance Department
PO Box 1963
Midland, MI 48640

Responses are requested within 30 days of the receipt of this report.

V. EVALUATION OF EFFECTIVENESS

The Bechtel Quality Control Training Program and its implementation, in general, meets the requirements of PSP G-8.1 and ANSI N45.2.6. There are areas where clarifications and improvements would help clearly demonstrate compliance to the requirements. These items are covered in the Recommended Corrective Actions of the findings and the observations. It is noted that there have been several recent improvements and positive actions in the area of QC training. These include:

1. The naming, in February 1981, of a full-time training coordinator. It is also planned to add an assistant to the training coordinator, and upon approval, there will be two persons administering the training program full time.



AUDIT REPORT

CONTINUATION SHEET

2. The training coordinator has recently attended a formal seminar conducted by Stat-A-Matrix in training of inspection personnel.
3. Bechtel QC has obtained the "Construction Technology Transfer Program" which is a Bechtel slide/tape presentation covering various specific subjects such as cable terminations, cable pulling, etc. The program covers all disciplines and is being integrated into the certification process. Additional visual aids are being prepared to cover other aspects of the QC program.
4. Further standardizing of performance and oral certification is being accomplished by the QC training coordinator.
5. Bechtel QC has begun documenting on-the-job training as part of the certification/training process. This training, which has been conducted, was not previously documented and resulted in the training documentation not actually representing the total number of training hours received prior to certification.

The present Bechtel Quality Control program does not meet the position in the NRC Generic Letter which proposes compliance with Revision 1 of Regulatory Guide 1.58. Education and experience are considered absolute in Revision 1, and the Bechtel program does not consider them absolute (reference Section 6 of Regulatory Guide). Also, Section 10 of the Regulatory Guide indicates that, where it is desired to establish that an individual has the required qualifications in lieu of required education and experience, documented evidence in the form of procedures and a record of a written test must be available. Bechtel does not administer a written test or provide evidence in lieu of the education and experience other than certification to the QCIs.

The Management Analysis Company (MAC), during their QA program assessment, reviewed one-fourth of the certified Bechtel Quality Control Engineers. Their conclusion is that the training and certification records are acceptable to the requirements of ANSI N45.2.6 and PSP G-8.1 (reference Final Report for Consumers Power Company dated May 27, 1981, MAC project No MAC-81-G-31, pages 367-369).

VI. LIST OF ATTACHMENTS

1. Audit Finding Reports
2. Completed Checklists (file copy only)

** how about the personnel?*



Consumers
Power
Company
QASO-0

PROJECTS, ENGINEERING AND CONSTRUCTION -
QUALITY ASSURANCE DEPARTMENT

AUDIT FINDING REPORT

Priority: 4 Trend: I-3 (I-5) Start Up: Indeterminate AI: S 920

"AS IS" CONDITION VERSUS "AS REQUIRED" / "AS PERMITTED" CONDITION WITH REFERENCES:

ANSI N45.2.6-1973, "Qualifications of Inspection Examination, and Testing Personnel for the Construction of Nuclear Power Plants," requires that on-the-job training be part of the program (Section 2.2.1 Training).

While on-the-job training is conducted by Bechtel Quality Control, there is no documentary evidence available that it is conducted.

APR SER NO:	M-01-24-1-01
PROJ/DEPT AUDIT/FILE:	Bechtel QC
DATE OF ORIGINATION:	July 3, 1981
FILE NUMBER:	18.4.3.6
DISTRIBUTION:	WRBird GAChien/KFH/CMC JWCook MADietrich GSKealey BWMarguglio DBMiller JARutgers AESchlaifer ESmith DATaggart RAWells JLWood ALAB-2 MPOAD Routing

RECOMMENDED CORRECTIVE ACTION:

1. Document on-the-job training as part of the certification process. (Bechtel has begun documenting this training.)

CORRECTIVE ACTION COMMITMENT:

Bechtel Quality Control did not concur that this item constituted a finding. A formal response, detailing the Bechtel QC position, is requested within 30 days of receipt of this report.

DATE OF C/A COMPLETION:

DATE OF C/A EFFECTIVENESS:

ORG. RESP FOR C/A:

Bechtel QC

PERSON MAKING C/A COMMITMENT:

N/A

METHOD OF VERIFICATION:

BECHTEL QC ADMINISTRATIVE INSTRUCTION # 801, REV 0, DATED 10-6-81 PROVIDES THE COMMITMENT TO DOCUMENT O.J.T., EVEN THOUGH BPC. DOES NOT AGREE THAT ANSI N 45.2.6 REQUIRES SUCH DOCUMENTATION.

IS AS REPORTABLE PER 90.55(a):

YES NO

IF "YES", DATE OF REPORT TO EBC:

N/A

IF "YES", TIME OF REPORT TO EBC:

N/A

IF "YES", NAME OF EBC OFFICIAL TO WHOM REPORTED:

N/A

IF "YES", WHO MADE REPORT:

N/A

APR ORIGINATOR'S SIGNATURE:

DR Keating

SUPERVISOR'S SIGNATURE:

DR Keating

C/A VERIFICATION SIGNATURE:

W.H. Turner

VERIFICATION DATE:

12-15-81

QC AI 1251B

MPQAD AFR M-01-24-1-01
QA AI S-920

Quality Control (QC) has revised and formalized the method of documenting on the job training as an additional good management practice only. Documentation of on the job training is as described in QC Administrative Instruction No. 801.

The above action was not taken to comply with ANSI N.45.2.6 or PSP G-8.1. As it is and has been QC's position that our training program is in full compliance with the stated requirements.

Additionally, the recent CPCo Audit of the Quality Control training program confirmed that the QC training program meets and exceeds ANSI requirements. The audit did not identify any findings, but did note that Quality Control has a good and progressively improving training program.

T/N 23440

Bechtel Power Corporation

Inter-office Memorandum

To All QCE's

Date October 6, 1981

Subject Documentation of
On The Job Training

From E. Smith

Of Quality Control

Copies to D. L. Daniels

At Midland, MI Ext. 204
Job No. 07220

ADMINISTRATIVE INSTRUCTION No. 801, Rev. 0

1.0 Purpose

- 1.1 This procedure is issued to provide a standard method of documenting on-the-job training (O.J.T.) towards certification in a specific PQCI.
- 1.2 The checklist referenced in this instruction is used to identify the subject areas in which O.J.T. is conducted. This checklist does not establish a minimum number of training activities or time-hours, as these variables are dependent on the availability of O.J.T. opportunities, classroom training, personal study, and previous experience.

2.0 Responsibility

- 2.1 The CQCE Administering training (CQCE certified level I, II, or III in the PQCI) is responsible for identifying the training activities as shown in the attached example (Exhibit 1).
- 2.2 The QC Training Coordinator is responsible for transferring the total duration hours of training to the respective individual training records (Figure 8.1 - 4).

3.0 Organizations Affected

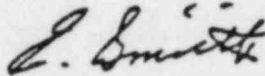
This administrative instruction affects only the Project Field Quality Control Organization.

4.0 Forms Required

O.J.T. Checklist & Field Training Summary. No. 7220/
QCFF-T-1 Rev. 0.

5.0 Procedure

- 5.1 The O.J.T. Checklist & Field Training Summary shall be processed in accordance with the instructions provided on the form. The data on this form shall be neatly printed. Reference Exhibit 1 for typical entries.
- 5.2 The completed O.J.T. Checklist & Field Training Summary shall be submitted with the oral and performance demonstration records for incorporation into the individual training record (Figure 8.1 - 4).



E. Smith
Project Field Quality Control Engineer

↓ EU
ES/SDK/EU/k1b

REQUEST FOR FURTHER INFORMATION

ACTION PARTY E. SMITH		DEPT. QC	COMPANY B.P.Co.
REFERENCE DOCUMENT NO. AFR M-01-24-1-01 ✓		DATE OF DOCUMENT 7-24-81	FILE
RESPONSE DATE 9-21-81	TODAY'S DATE 10-12-81	MPQA EVALUATOR D.M. TURNBULL	PHONE NO. 6-308

VALUATION OF EARLIER RESPONSE YOUR RESPONSE SAYS, IN ESSENCE, THAT YOUR PROGRAM MEETS ALL EXISTING REQUIREMENTS AND THAT ~~IT~~ IT WILL NOT BE CHANGED WITHOUT A FORMAL REQUEST.

THIS IS TO ADVISE YOU THAT IT IS A C.P.Co. REQUIREMENT THAT ALL TRAINING NEEDED TO JUSTIFY CERTIFICATION TO ANSI N 45.2.6, INCLUDING INITIAL ORIENTATION AND ON-THE-JOB TRAINING, BE DOCUMENTED IN AUDITABLE FORMAT AND BE AVAILABLE IN SUFFICIENT DETAIL TO PROVIDE OBJECTIVE EVIDENCE OF COMPLIANCE TO ANSI N 45.2.6 AND AA/PSP G-8.1.

ADDITIONAL DATA/ACTION REQUIRED RESPOND, AFFIRMING YOUR INTENTION TO COMPLY WITH THE ABOVE, IN THE CASE OF ALL CERTIFICATIONS FROM THIS DATE FORWARD. IN LIGHT OF THE UPCOMING AUDIT, WHICH WILL COVER EXISTING CERTIFICATIONS, ESTABLISHING C.P.Co. CONFIDENCE IN THE COMPETENCY OF THE INDIVIDUALS, RETROFITTING THESE WILL NOT BE REQUIRED.

DISTRIBUTION ADDRESSEE
B MILLER
R BIRD
POA ROUTING
ORIGINATOR

SEBA
 DISCUSSED WITH E. SMITH ON (DATE) 10-12-81

NEXT REPLY AGREED TO BY (DATE) _____

PLEASE REPLY BY (DATE) 10-23-81 GIVING DATE BY WHICH NEXT REPLY CAN BE EXPECTED.

SIGNATURE D.M. Turnbull DATE 10-12-81 PHONE 6-308
(FOR MPQA SITE SUPERINTENDENT)

QC AI 1251A

MPQAD AFR M-01-24-1-01
QA AI S-920

After giving consideration to the request of MPQAD in QA AI S-920, and evaluating the requirements of ANSI N45.2.6 and AA/PSP G-8.1, it is the position of Bechtel Quality Control that our current program for documentation of training is in compliance with these standards.

QA AI S-920 indicated that on the job training must be documented to provide the detail necessary to render the quality of the document determinate. The following items provide more than adequate assurance that training and certification documents support qualification of Bechtel CQCEs.

1. Training necessary to establish the minimum level of education is always documented in accordance with AA/PSP G-8.1.
2. On the job training is documented when necessary to support certification where minimal related experience exists.
3. The approximate duration of which on the job training takes place can be identified by the difference between the commencement of CQCE training and the certification evaluation dates.
4. Finally a comprehensive oral and performance evaluation is conducted by a level II Quality Control Engineer which attests to the fact that a satisfactory level of training and/or experience exists prior to certification.

In view of this response, Bechtel Quality Control will continue with their current program of training documentation; however, if formally requested by the client, Bechtel Quality Control will begin documentation of on the job training relative to initial certification in a given PQCI.

T/N 23428

REQUEST FOR FURTHER RESPONSE

ITEM NO. 2-724
OC # 12-1A

ACTION PARTY <u>E. SMITH</u>		DEPT. <u>QUALITY CONTROL</u>	COMPANY <u>BPC</u>
REFERENCE DOCUMENT NO. <u>MPQA AFR M-01-24-1-01</u>		DATE OF DOCUMENT <u>7-24-81</u>	FILE NO. <u>16.0</u>
RESPONSE DATE <u>9-1-81</u>	TODAY'S DATE <u>9-2-81</u>	MPQA EVALUATOR <u>A.E. SCHLAIFER</u>	PHONE NO. <u>551</u>

EVALUATION OF EARLIER RESPONSE BPC QC's position that it is meeting the requirements of the appropriate standards and procedures in respect to the quantity and quality of performance of on-the-job training is recognized however the documentation of on-the-job training must be considered nonconforming in the sense that it does not provide the detail necessary to render the quality of the documentation determinate.

ADDITIONAL DATA/ACTION REQUIRED Provide documentary evidence that each person who verifies conformance of work activities for purposes of acceptance has been given on-the-job training applicable to the assigned inspection task. The records should show what was covered, how it was covered and how much training was received.

- DISTRIBUTION
- ADDRESSEE
- JB MILLER
- WR BIRD
- MPQA ROUTING
- ORIGINATOR
- SUBJECT FILE
- TICKLER

- DISCUSSED WITH E. SMITH ON (DATE) 9-2-81
- NEXT REPLY AGREED TO BY (DATE) 9-18-1981 BY J. Kieber
- PLEASE REPLY BY (DATE) 9-4-81 GIVING DATE BY WHICH NEXT REPLY CAN BE EXPECTED.

SIGNATURE A.E. Schlaifer DATE 9-2-81 PHONE 551
(FOR MPQA SITE SUPERINTENDENT)

QC AI 1251

MPQA AFR M-01-24-1-01
QA AI S-920

The above reference identifies that on the job training is to be a part of the QCE certification program. It also states that on the job training is being conducted by Bechtel Quality Control, but not documented.

Para. 8.5 of AA/PSP G-8.1 Rev. 4 sets forth specific requirements for documentation of training sessions. It is the position of Bechtel Quality Control that this reference as well as ANSI N45.2.6 Section 2.2.1 identify the documentation requirements for formal (i.e. classroom) training sessions. Quality Control is and will continue to document all classroom training sessions. Quality Control feels that this meets the requirements of PSP G-8.1 and ANSI N45.2.6.

The frequency of documenting on the job training has increased in the past five (5) months for the purpose of evaluating the total amount of training being conducted within Quality Control.

In summary, it is Bechtel Quality Control's position that we are meeting the requirements of the appropriate standards and procedures in respect to documentation of training.

No further action by Quality Control is therefore required.

T/N 23415



Consumers
Power
Company
QA50-0

PROJECTS, ENGINEERING AND CONSTRUCTION -
QUALITY ASSURANCE DEPARTMENT

AUDIT FINDING REPORT

Priority: 4 Trend: I-3 (I-3) Start Up: Indeterminate AI: S 921

AS IS CONDITION VERSUS "AS REQUIRED" / "AS NEEDED" CONDITION WITH REFERENCES:

- 1) ANSI 45.2.6-1973, Table 1, indicates that only Level II's may "Evaluate inspection and test results" and that "Reporting of inspection and test results" is done exclusively by Level IIs
- 2) Paragraph 4.2.2(4) of AAPD/PSP G-8.1, Revision 3, dated March 14, 1980, lists "review and acceptance of report of inspection and tests results" as a Level II, not a Level I, duty and responsibility.
- 3) Quality Control Instruction (QCI) 7220/C-2.00, Revision 1, Activity 3.1 calls for the following:
"Test Review

- A. Review and sign Lab Test Reports verifying:
 1. Quantity of fines is reported (PPM).
 2. Completeness of forms (all applicable blanks filled in).
 3. Proper date and location.
- B. Review and sign Lab Test Reports verifying quantities of fines meets specification requirements for:
 1. Individual wells

NOTE: If fines exceed the specified tolerances, resample in accordance with Activity No. 2.1.B.

(Continued page 2)

APR REC NO:
M-01-24-1-02

PROJ/DEPT AUDITED:
Bechtel QC

DATE OF ORIGINATION:
July 3, 1981

FILE NUMBER:
18.4.3.6

DISTRIBUTION:
WRBird
CACHien/KFH
JWCook
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BWMarguglio
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RAWells
JLWood ALAB-2
MPQAD Routing

RECOMMENDED CORRECTIVE ACTION:

- 1) Revise any pertinent procedures and instructions so as to assure that all reviews for evaluation or reporting of inspection and test results are made only by a Level II QCE.
- 2) If the explanation above is the official position, revise the QCI Act. No. to reflect what the Level I is actually inspecting. (Continued on page 2)

CORRECTIVE ACTION COMMITMENT:

Bechtel QC did not concur that it was inappropriate for a Level I QCE to sign off on Act. No. 3.1. A formal response detailing the Bechtel QC position is requested within 30 days of the receipt of this report.

DATE OF C/A COMPLETION:

DATE OF C/A EFFECTIVENESS:

ORG. RESP FOR C/A:

Bechtel QC

PERSON MAKING C/A COMMITMENT:

N/A

METHOD OF VERIFICATION:

SEE SERIAL 14153A

IS AF REPORTABLE PER 50.55(a):

YES NO

IF "YES", DATE OF REPORT TO MRC:

N/A

IF "YES", FINE OF REPORT TO MRC:

N/A

IF "YES", NAME OF MRC OFFICIAL TO WHOM REPORTED:

IF "YES", WHO MADE REPORT:

N/A

N/A

AFR ORIGINATOR'S SIGNATURE:

DR Keating

SUPERVISOR'S SIGNATURE:

DR Keating

C/A VERIFICATION SIGNATURE:

W. Turnbull

VERIFICATION DATE:

1-7-82 CONFIRMING ACTION OF OCT 9/81

IN SERIAL 14153A

CONTINUED:

"AS IS" CONDITION VERSUS "AS REQUIRED/"AS NEEDED" CONDITION WITH REFERENCES:

B.

2. Average quantity of the system

NOTE: If the average quantity of the system exceeds those specified, the subcontractor has 24 hours to correct the condition. If the condition has not been corrected, individual wells shall be resampled and tested in accordance with Spec. C-88, Section 6.A.2 (re-sampling in accordance with Activity No. 2.2.B and C)."

- 4) Contrary to the requirements of Paragraphs 1 and 2 above, the activity described in Paragraph 3 above was signed off by a Level I in one of five cases reviewed. Reference QCIR C-2.00-31.
- 5) An explanation was forwarded indicating that the Level I was only inspecting to ascertain that the test report was available and properly approved by a Bechtel Level II.

RECOMMENDED CORRECTIVE ACTION:

- 3) Review any QC records in which a Level I QCE has performed evaluation or reporting of inspection and test results.
- 4) Have a Level II QCE review the referenced QCIR and any others identified as a result of the review in #3 above and correct in accordance with PSP G-7.1.

TO

FROM DMTurnbull, MPOAD

DMT Turnbull

DATE October 9, 1981

SUBJECT MIDLAND PROJECT - ~~APR 01-24-1-02~~
File 16.0 Serial 14153A

**Consumers
Power
Company**

INTERNAL
CORRESPONDENCE

CC CACHien
DEHorn
ESmith
File 18.4.3.6

I feel that the audit finding takes a rather narrow view of the word "review," and that the problem is one of semantics rather than a violation of the QC program.

In Activity 3.1, the inspector is inspecting a piece of paper to specific accept/reject criteria which are included in the PQCI. In my opinion, this is within his area of responsibility according to both ANSI N45.2.6 and PSP G-8.1. It is, perhaps, unfortunate that the instruction uses the word "review" instead of "inspect" or "read."

It is my opinion that the word "review" in the context of ANSI N45.2.6 involves a measure of judgment requiring experience. It differs from "inspect" which involves only comparing a characteristic with a specification or a pre-established criterion.

Since both auditors involved in this audit have left the site, I am administratively ~~closing this finding based on the above rationale.~~

DMT/dea

QC AI 1252B

MPQAD AFR M-01-24-1-02
QA AI S-921

Per conversation with MPQA QAE D. Horn on 10/1/81, the Bechtel Quality Control position regarding Level I/II review and acceptance of inspections was evaluated and accepted as meeting the requirements of ANSI N45.2.6. The basis for concurrence were two points:

1. When reviewing documentation, the Level I QCE is only comparing data for accuracy and completeness.
2. All inspection records with attachments are reviewed and accepted by a Level II QCE.

Additionally, D. M. Turnbull letter to E. Smith #14153 concurs that AFR M-01-24-1-02 is a completed item and that no further response from Quality Control is required.

T/N 23437

REQUEST FOR FURTHER RESPONSE

ACTION PARTY E Smith		DEPT. Quality Control	COMPANY Bechtel
REFERENCE DOCUMENT NO. AFR M-01-24-1-02		DATE OF DOCUMENT 7/24/81	FILE
RESPONSE DATE 9/14/81	TODAY'S DATE 9/21/81	MPQA EVALUATOR A E Schlaifer	PHONE NO. X-294

EVALUATION OF EARLIER RESPONSE Response-QC AI-1252-A, dated 9/14/81, restates the BPCo position with respect to AA/PSP G-8.1 paragraph 4.2.1, that a Level I QCE's duties and responsibility is in the performance of designated inspection and tests as specified in the applicable PQCI's, specifications, etc. The response also recites AA/PSP G-6.1 paragraph 3.3.3 which states that review means "To examine any form of documentation for the purpose of establishing its acceptability to specific requirements."
PSP G-6.1 goes on to state: "Signoff by the CQCE on the IR will be performed upon review and acceptance of said documentation."
According to ANSI N45.2.6-1973, as recited in the earlier Request for Further Response, Evaluation of inspections and tests; Maintenance of surveillance over inspection and tests
(Continued on page 2)

ADDITIONAL DATA/ACTION REQUIRED Provide corrective action as recommended by the referenced document.

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MR MILLER

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MPQA ROUTING

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SUBJECT FILE

TICKLER

JR Decker, Cognizant QA Engr. (effective 9/28/81)
DISCUSSED WITH E Smith ON (DATE) 7/3/81

NEXT REPLY AGREED TO BY (DATE) _____

PLEASE REPLY BY (DATE) 10/5/81 GIVING DATE BY WHICH NEXT REPLY CAN BE EXPECTED.

SIGNATURE A E Schlaifer / mt DATE 9/21/81 PHONE X-294
(FOR MPQA SITE SUPERINTENDENT)

EVALUATION OF EARLIER RESPONSE: (Continued)

performed by others; determining the validity - are clearly the functions of a Level II QCE. Acceptance of documentation is definitely a Level II function. If "acceptance" of documentation is intended to mean merely "receipt" of documentation, then it should be defined as such.

The fact that a Level II CQCE signs at the bottom of the IR is not relevant to the matter of Review of Documents by a Level I for Acceptability. The following transaction is recited from CPCo Serial 312FQA79, J L Corley to File 0.4.2, September 14, 1979:

"....Mr Gallagher countered that these people had signed Inspection Records and, therefore, they had individually accepted the items. Mr Marguglio stated each individual had signed for the characteristics he had inspected but that a Level II signature reviewing what they had done was necessary. Mr Gallagher countered by stating the Level II's were not looking at the specific "tests" that these people were performing (which, in actuality, are measurements and observations and not tests)...."

Thus, when a Level I CQCE signs an Inspection Record opposite the line word "Review" where review of documentation means "review and accept", it constitutes an act that is not in conformance with ANSI N45.2.6-1973, Paragraph 3.2.2a.

In its response to the earlier Request for Further Response, BPCo QC failed to address the matter of the Further Request.

QC AI 1252-A

MPQAD AFR M-01-24-1-02
QA AI S-921

AA/PSP G-8.1 para. 4.2.1 states that a Level I QCE's duties and responsibility is in the performance of designated inspections and tests as specified in the applicable PQCI's specifications etc.. AA/PSP G-6.1 para. 3.3.3 identifies the methods to be used for performing the inspection activities. One of these methods is the review, which states, "To examine any form of documentation for the purpose of establishing its acceptability to specific requirements". PQCI C-2.00 requires the Level I QCE to review the test report for completeness and accuracy. It must be noted that a Level II QCE has in all cases reviewed this test report previously to evaluate the results of the test and determine the validity of the test data in compliance with the project specifications and subcontractor program requirements. This Level II QCE review and acceptance is documented on the test report.

In summary it remains the position of Quality Control that the requirements of PSP G-8.1 and ANSI N45.2.6 are being met.

T/N 23427

ACTION PARTY E Smith		DEPT. Quality Control	COMPANY BPC
REFERENCE DOCUMENT NO. AFR M01-24-1-02		DATE OF DOCUMENT 7/24/81	FILE 16.0
RESPONSE DATE 9/1/81	TODAY'S DATE 9/3/81	MPCAD EVALUATOR A E Schlaifer	PHONE NO. 551

EVALUATION OF EARLIER RESPONSE Based on the ANSI N45.2.6-1973 definition of the qualification of Level I vs Level II persons, CPCo's position is that the observations noted in referenced AFR are in conflict with the program requirements. This is vs BPC position to the contrary. BPC position is based on the statement, among others, that:

"...2) The Level I is only comparing data for accuracy and completeness..."

According to ANSI N45.2.6-1973, Para 3.2.2a, a Level I person is qualified to:

1. Perform inspections and tests.
2. Be familiar with the tools and equipment to be employed and be proficient in their use.
3. Be familiar with inspection and measuring equipment calibration and control methods.

(CONTINUED)

ADDITIONAL DATA/ACTION REQUIRED Provide Corrective Action as recommended by the referenced document.

DISTRIBUTION

- ADDRESSEE
- MILLER
- BIRD
- QA ROUTING
- ORIGINATOR
- SUBJECT FILE
- OFFICER

DISCUSSED WITH E Smith ON (DATE) 7/3/81

The Audit Finding Report noted that BPC QC did not concur with the Audit Finding.
 NEXT REPLY AGREED TO BY (DATE) _____

PLEASE REPLY BY (DATE) 9/11/81 GIVING DATE BY WHICH NEXT REPLY CAN BE EXPECTED.

SIGNATURE A E Schlaifer DATE 9/3/81 PHONE 551

FOR MPOA SITE SUPERINTENDENT)

R.
Continued

Evaluation of Earlier Response (cont.):

4. Verify that the equipment is in proper condition for use;

1 a Level II person is qualified to:

1. Perform inspections and tests.
2. Evaluate the results of inspections and tests.
3. Supervise or maintain surveillance over the inspection and tests performed by others.
4. Calibrate or establish the validity of calibration of inspections and measuring equipment.
5. Plan and set up tests.
6. Determine the validity of test results.

QC AI 1252

MPQA AFR M-01-24-1-02
QA AI S-921

Quality Control's position is that the observations noted in referenced AFR are not in conflict with program requirements for the following reasons:

- 1) All test reports were reviewed and accepted by a Bechtel Level II QCE as being in compliance with specification requirements prior to being submitted to the QC department.
- 2) The Level I is only comparing data for accuracy and completeness.
- 3) All inspection records with attachments are reviewed and accepted by a Level II QCE as a QCIR closure function.

In summary, it is Quality Control's position that the requirements for review and acceptance of data by a Level II QCE are being met, and therefore there is no deficiency and no action is required.

T/N 23416



Consumers
Power
Company

Midland Project: PO Box 1363, Midland, MI 48640 • (517) 631-0951

October 29, 1981

Mr E Smith
Bechtel Power Corp
PO Box 2167
Midland, MI 48640

MIDLAND PROJECT - CONSUMERS POWER AUDIT M-01-24-1
Serial 14448

References: 1. ESmith to DMTurnbull, FOCL-844 dated October 9, 1981.
2. DMTurnbull to ESmith, Serial 14068 dated October 15, 1981.

This letter documents the closure of Unresolved Item (URI) 03.

Reference 2 documented the closure of Observation 2 and URIs 01, 02 and 04.

The basis for closing URI 03, which involved the specificity of criteria used by certifiers in evaluating candidates for Level I inspection certificates, is described below.

You stated, by telephone on October 29, 1981, that the practical training which led to certification would be shown on candidates' "Record of Training" *in the future*.

The MPQAD will conduct its own evaluation of the certification process and of the candidates on an ongoing basis as described in my letter Serial 14076, rather than depending on programmatic or documentary changes in the Bechtel system.

The above has no relationship to the matter of Revision 4 of AAPD/PSP G-8.1 being put into effect without MPQA approval. I understand that you are working to correct this now.

D M Turnbull
Site QA Superintendent

DMT/dea

CC WRBird, P-14-418A
MADietrich, Bechtel QAE

BWMargoglio, JSC-220A
TKSubramanian, Midland QA



Consumers
Power
Company

Midland Project: PO Box 1963, Midland, MI 48640 • (517) 831-0961

October 15, 1981

Mr E Smith
Bechtel Power Corporation
PO Box 2167
Midland, MI 48640

MIDLAND PROJECT - YOUR FQCL-844, [REDACTED]
File 16.0 Serial 14068 AI: S-1087

Your response to Observation #2 is accepted in light of the way in which this observation was worded. However, you are aware, I am sure, that the auditors involved in this audit are no longer on site, and so your responses must be evaluated by different personnel. This naturally introduces some different thoughts on the subject.

As I see it, Rev 3 of AAPD/PSP G-8.1 contained a commitment to evaluate the effectiveness of the job site training program on an ongoing basis. Revision 4 of this document deleted this commitment and I am unable to find anything which replaces it. Your response, referenced above, says you do evaluate the program on a continuous basis, which makes me feel comfortable about the present, but the deletion of the commitment causes me concern about the future, and must be viewed as a degradation of the program. I would appreciate your comments on this aspect of the problem, and I would also appreciate having a print of the MPQA approval of Revision 4. We are not able to find it in our files.

Your response to URI-01 is accepted in light of the wording used in 4.2.1 of Revision 4, which can be read as saying that providing training to uncertified QCE's is a duty, as opposed to a responsibility, of Level I personnel. The thrust of URI-01 was that such responsibility should rest with Level II people, even if the actual work was delegated, on occasion, to a Level I.

Your response to URI-02 is acceptable.

Your response to URI-03 does not resolve the basic problem we have. My interpretation of Criteria V and XVII of 10CFR50 is that QCE qualification folders should contain enough data to permit objective evaluation, by a third party, of the competency of the individual to perform his assigned tasks. At present, all we have is a certificate that in the opinion of the certifier, based on unknown criteria, the person is competent.

We do not record any details of the certifier's evaluation of an applicant's past experience, or his assimilation of training, or the nature of the questions he asked during the oral examination. This does not permit independent evaluation of the process or the capabilities of the person, which is the intent of criterion XVII of 10CFR50.

It is also my opinion that the guidelines provided to the certifier lack specificity, particularly in the area of education and experience requirements, and what deficiencies in these areas can be made up for by training.

We frequently rely on Section 5.1.2 of G-8.1, which abrogates the specificity of Section 5.2, but without providing alternate specifics. This places all our reliance on the personal judgement of the certifier, which can vary from person to person and from time to time, depending on how badly we need people.

Bearing in mind that the competency of existing personnel is to be evaluated by an upcoming special audit, and that improvements to the program we make now need not impact past activities, it is requested that you approach this subject in a constructive manner and see if you can provide the documentation necessary to eliminate the need for special audits in the future, or the need for MPQA to witness certifications.

Your response to URI-04 is accepted.

D. M. Turnbull

D M Turnbull
MPQAD Site Superintendent

DMT/tkm

CC WRBird
JWCook
MADietrich
BWMarguglio
DBMiller
RAWells
JLWood
DCC
18.4.3.6

CONSUMERS POWER COMPANY

RECEIVED

OCT 14 1981

FIELD QUALITY ASSURANCE
MIDLAND, MICHIGAN

Bechtel Power Corporation

Post Office Box 2167
Midland, Michigan 48640



October 9, 1981

Consumers Power Company
P. O. Box 1963
Midland, MI. 48640

Attention: D. M. Turnbull

THIS COPY FOR

ACTION PRINT	ELT		
INFO PRINTS			
MPGA ROUTING	DMT		
PRINT TO FILE			
ORIG TO FILE	16.0		

Reference: Midland Project, Units 1&2
CPCo Audit #M-01-24-1
Observations 2 & 4 URI's
as detailed below
FQCL-844

Dear Mr. Turnbull:

Reponse to M-01-24-1 Observation #2:

Quality Control evaluates the effectiveness of the QC training program on a continuous basis through previously established programs i.e. review of NCR's, MFQAD Trending etc.. Therefore, Quality Control has determined that a revision to PSP G-8.1 is not warranted.

Response to M-01-24-1-01 URI:

PSP G-8.1 Rev. 4 para. 8.3.1 requires that a one hour minimum training session be held at least once each month by a Level II or III CQCE. Additionally, training records substantiate a significant amount of training for uncertified CQCE's by Level II CQCE's. Therefore, Quality Control has determined that a revision to PSP G-8.1 is not warranted.

Response to M-01-24-1-02 URI:

Clarification of PSP G-8.1 Rev. 4 para. 8.3.1 is as follows: these training sessions shall be attended by CQCE's . . . consistent with work operation in progress, it is logical to assume that a CQCE may not have a minimum of one hour training per month.

Although we strive to give all CQCE's a minimum of one hour training a month, PSP G-8.1 Rev. 4 does not specifically require that all CQCE's receive a minimum of one hour training per month by a Level II or III.

Mr. D. M. Turnbull
October 9, 1981
Page 2

Response to M-01-24-1-03 URI:

Current requirements in PSP G-8.1 Rev. 4 require that an oral and performance evaluations be made by Level II's prior to issuing certification in a PQCI. "Equivalent" experience is evaluated during training for certification. Because a prior determination of "how much" training an individual will require cannot be made by reviewing a resume', all perspective applicants for certification receive standard orientation and PSP training. Additional training in specific PQCI's varies depending upon how quickly the applicant "picks up" on the paper flow and actual field work operations.

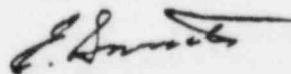
Response to M-01-24-1-04 URI:

In the case stated, Mr. Van Doorne's verification of training exists in the proper completion of Appendixes 8.1.1 and 8.1.2 of PSP G-8.1 Rev. 4, the oral and performance documentation, with the recommendation of certification statement in the remarks section on the bottom of the forms.

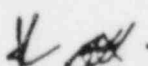
Additionally a completed QCIR reviewed and approved by the Level II or III giving certification assures that the candidate can perform the work operations. As stated above the determination of whether the candidate was ready for certification was based on interviews with the QCE during on-the-job training.

If you have any further questions concerning the above, please contact this office.

Sincerely,



E. Smith
Project Field Quality Control
Engineer


ES/SDK/BTF/jmk

*Appreciation
Findings*

275

275-277

NRC Inspection Reports 79-10, 79-19

275. NRC Inspection Report 79-10 covered an inspection conducted in May 1979.^{694/} In the report Mr. Gallagher, one of the inspectors, indicates a dissatisfaction with the ANSI qualifications of quality control personnel in the area of containment post-tensioning.^{695/} He did not issue a non-compliance concerning the matter. ANSI, the American National Standards Institute, comprises committees which represent experts in particular engineering areas.^{696/} The committees set industry-wide standards for a particular discipline.^{697/} Mr. Gallagher is not a member of any ANSI Committee.^{698/} Mr. Gallagher testified that, in the technical judgment of Consumers Power, the post-tensioning inspectors were qualified under applicable ANSI standards, but that he disagreed with this analysis.^{699/} In September 1979 Consumers Power management and Mr. Gallagher met to resolve this difference.^{700/} The NRC is now satisfied with the inspector's qualifications.^{701/}

^{694/} Gallagher, Tr. 2427-28.
^{695/} Id.; Stamiris Exhibit No. 3, Attachment No. 10.
^{696/} Gallagher, Tr. 2458.
^{697/} Id.
^{698/} Id.
^{699/} Gallagher, Tr. 2460.
^{700/} Gallagher, Tr. 2428.
^{701/} Gallagher, Tr. 2428.

276. The question of quality control inspector qualifications also arose in the context of the planned remedial work on soils.^{702/} Mr. Gallagher expressed the view that Consumers Power, as well as other nuclear construction permit holders, have misused an exception in an ANSI standard (ANSI N.45.2.6).^{703/} He opposes the exception in the standard which permits the substitution of certain educational or experiential requirements for inspectors if an equivalent level of competence can be demonstrated.^{704/} In Mr. Gallagher's opinion, the debate over qualification of quality assurance personnel is "the biggest problem facing our industry today."^{705/} It was not peculiar to the Midland site, but endemic to the industry.^{706/} Mr. Cordell Williams, the chief inspector for Region III in the civil area,^{707/} disagrees with Mr. Gallagher's assessment of the ANSI waiver provision.^{708/} He believes the flexibility it provides is necessary.^{709/}

^{702/} Gallagher, Tr. 2432.

^{703/} Id.; Gallagher, Tr. 2460.

^{704/} Gallagher, Tr. 2432.

^{705/} Gallagher, Tr. 2433.

^{706/} Gallagher, Tr. 2433.

^{707/} Williams, Tr. 2197-98.

^{708/} Williams, Tr. 2207.

^{709/} Id.

277. According to Mr. Marguglio, the Midland quality control and quality assurance inspectors are well qualified.^{710/} For example, as a part of the recent improvements in the MPQAD quality assurance program, quality control inspectors are required to be certified on particular inspection plans, a requirement in excess of ANSI standards.^{711/} John Gilray, from the NRC Staff, cited these upgraded qualifications in his affirmative assessment of Midland's quality assurance program.^{712/} In the recent MAC audit, qualifications of both Bechtel and Consumers Power inspectors were reviewed.^{713/} The auditors found the inspectors properly qualified for the tasks to which they are certified.^{714/}

278. Mr. Williams testified that the number of persons presently on the Midland civil quality assurance staff is adequate.^{715/} However, for some of the planned remedial work, differently qualified personnel may be necessary.^{716/} Consumers Power is aware of this and has pledged to acquire such persons as a condition precedent to the remedial work.^{717/}

^{710/} Marguglio, Tr. 1529.

^{711/} Marguglio, prepared testimony at p. 32, following Tr. 1424.

^{712/} Gilray, Tr. 3713.

^{713/} Staff Exhibit No. 4, at p. 10.

^{714/} Id.

^{715/} Williams, Tr. 2216.

^{716/} Id.

^{717/} Marguglio, Tr. 1529.

TO: Ron Gardner
384-2550

FR: B. PATON
ELD - 83 -

5-Pages

229. Another adverse finding of the May 1981 inspection involved the qualification of personnel doing first-line inspection. Tr. 2202-03. It appeared to the Staff that quality control personnel did not have adequate experience for quality control inspection. Tr. 2202. CPC's own records also demonstrated NRC's basis for this concern. Tr. 2203. Staff witness Cordell Williams testified that NRC discovered certain failures of the sort that an experienced quality inspector would not make. Tr. 2206. He recognized that the ANSI Standard N45.2.6, which is recognized by the NRC Regulatory Guide 1.58, allows a fairly liberal interpretation concerning the qualifications of inspectors. Tr. 2206. The NRC questioned the extent to which CPC is applying the ANSI Standard. Tr. 2206. Mr. Williams later testified, however, that the NRC's concerns about the adequacy of experience and education of QC and QA personnel arising out of the May 1981 inspection is one that has been addressed at nearly all plants and that the problems are no worse at Midland than they are at other plants. Tr. 2212.

230. Staff witness Gallagher criticized the industries' standards for qualification and experience of inspection and testing personnel as permitting too much latitude in provisions for waiving educational and experience requirements. Tr. 2432. He testified that the provision of the industries' standard addressing waiver of requirements is in his opinion abused not only at the Midland site but also at a number of other sites where the issue has been raised. Tr. 2432.

231. On cross-examination by CPC, Mr. Gallagher agreed that the American National Standards Institute is comprised of committees which are representative of collections of experts and that their purpose is to derive

industry-wide standards for particular disciplines. Tr. 2458-9.

Mr. Gallagher acknowledged that the committee responsible for ASNI Standard N45.2.6 has discussed, debated and given consideration to modifying the standard but as yet they have not done so. Tr. 2460.

232. We asked Staff witness Gilray his views concerning the waiver provisions of the ANSI Standard. Mr. Gilray testified that he thinks the flexibility permitted by the waiver provisions needs to be there to certify and qualify an individual that does not have high school or graduate education. Tr. 3845-46. He stated that whenever the waiver provisions are used there should be documented justification as to what proficiency tests or qualification tests the individual went through. Tr. 3846. He further stated that the sort of documentation required is presently being studied by the NRC. Tr. 3846.

233. The testimony in this proceeding demonstrates certain problems that arise from the lack of definitive standards for waiving the education and experience requirements of ASNI Standard N45.2.6 for QA inspection personnel. In light of testimony that these problems have been addressed by the appropriate committee of the American National Standards Institute and the NRC and that no changes have resulted to date this Board does not believe it appropriate for it to undertake corrective action in that regard.

234. Another subject within quality assurance on which there was extensive cross-examination concerned the effect of the Midland Project Quality Assurance Department (MPQAD)--the new integrated organization described by Mr. Marguglio in his direct testimony. Marguglio, p. 4, et seq. In response to Intervenor cross-examination Mr. Marguglio testified that

CHAIRMAN EECHHOEFER: Mr. Gardner.

MR. MILLER: Mr. Gardner, yes, sir. That process was underway and we believe that the staff would be able to present testimony. But one of the items that Mr. Gardner requested be done and which the applicant agreed to do was to have a 100 percent over inspection of the electrical work inspected by inspectors whose qualifications had been subject to his audit and as to which there was some question.

IE REPORT 81-12

That request was made in early January and at the time that it was made, when the company agreed to it, we believed that we would be able to complete it in adequate time for Mr. Gardner to review the results and present testimony.

The scope of the work has increased dramatically in the sense that it was not known at that time just how many inspections these individuals had been involved in. We have now determined that there was a significant number of inspections. The over inspection program is proceeding, but it is not yet completed. So it is for that reason, I guess, that the staff will not be presenting Mr. Gardner's testimony at this time. I would hope that sometime the week of the 16th perhaps we will be in a position to have closed this item out.

The final preliminary matter that I had really

1 is a question to Judge Harbour, who I understand was the
2 one of the Board who was responsible for this, and that
3 is the question of what issues, if any, concerning the
4 quality assurance program on the underpinning work does
5 the Board wish to receive testimony on?

6 MR. PATON: Mr. Chairman, I would like to respond
7 to that before the Court responds to the third of those
8 three preliminary matters.

9 CHAIRMAN BECHHOEFER: Fine, fine. You may.

10 MR. PATON: Number one, Mr. Miller indicated
11 that exceptions were taken to the remand proceeding by
12 intervenors other than Dow. I think Mr. Marshall would
13 probably like the record to show that that does not include
14 the Mapleton intervenors.

15 MR. MARSHALL: Correct. I was going to state
16 that. That is absolutely correct.

17 CHAIRMAN BECHHOEFER: I might say the Board
18 received a copy of a motion for extension of time to file
19 exceptions and we just referred our copy -- it looked like
20 an original almost -- and we referred it to the Appeal
21 Board.

22 MR. MARSHALL: It has been already denied and
23 Mr. Paton is correct. We do not participate in that.

24 CHAIRMAN BECHHOEFER: All right.

25 NRC MR. PATON: I would also like to note for the

LAWYER

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Board the appearance of co-counsel Michael N. Wilcove,
W-i-l-c-o-v-e. He has entered his appearance in this
proceeding.

With respect to the matter involving Mr. Gardner,
we didn't learn until very late last week of the greatly
expanded scope of that work or I think we would have
advised the Board about it. I think in fact that the final
decision that it was going to be such that we couldn't
get the job done, I learned of it I think on Friday
afternoon. But I think before we, I think we should
get, try to get from the Applicant as specific information
as we can as to when he would be finished and be in a
position where the NRC could then go in and complete its
inspection.

The other matter is that with respect to the
question to Judge Harbour about his questions on QA.
I would ask the Board if we could, if possible, that we
pass over that and any other preliminary matters that
would take any time if possible until we complete Mr.
Keppler's testimony. I have advised the Board that he
has a very serious scheduling problem, and if there are
any of these preliminary matters that we could handle
after he has completed his testimony, we would appreciate
it.

1 JUDGE DECKER: Mr. Marguglio, are you familiar
2 with these two audit reports, Consumers Exhibit 22 and 3?

3 A (Witness Marguglio) Yes, more familiar with
4 the latter because the latter was performed during the
5 period when I had more responsibility with regard to
6 Midland.

7 JUDGE DECKER: You said that you read these
8 and that if you saw changes in there that were a particular
9 concern or a particular seriousness that you took some
10 action. Did you do that in either case here?

11 A (Witness Marguglio) With regard to the second
12 I have, yes.

13 MS. STAMIRIS: I am sorry to interrupt, but
14 when you say "second," do you mean the November?

15 A (Witness Marguglio) The latter one. ^{Exhibit 22} With
16 regard to the November audit, the November, '81 audit,
17 the report for which was published December 14.

18 I should make a clarifying point that when the
19 other audit was published, my responsibilities with
20 regard to Midland were limited, as I had already testified
21 to the Board.

22 CHAIRMAN BECHHOEFER: At this stage we will turn
23 back to you. I think we wanted to demonstrate what relat-
24 ionship Mr. Marguglio had.

25 JUDGE DECKER: Yes, I guess I'd better ask the

...d.
... If I remember your question.

DECKER: The first one was: Are you

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with these two audit reports?
(Witness Bird) I have a general familiarization
one that was run in December. (November)
more specifically with the

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JUDGE DECKER: That is Exhibit 22, right?
(Witness Bird) yes, sir.

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ALC

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JUDGE DECKER: And you are on the distribution list for these. What do you do with these when you get them?

A (Witness Bird) These audit reports or any audit report quality action request or non-conformance report that is written by MPQAD, I, as are most of the people who are on the distribution -- so my comments go for all of them. My actions are similar to Mr. Marguglio's I read them. I tried to reflect back on what I have seen before to see if there is any threads there that might require more specific action than is specifically called out in any of those given reports. I read them for clarity to make sure that they really could be understood, that there can be no miscommunication in there that anybody could misunderstand. And I specifically look to see on what is being classified as the root cause, is the action that is being proposed in these appropriate to prevent recurrence.

ALL E.S.

JUDGE DECKER: That's all I have.

CHAIRMAN BECHHOEFER: Ms. Stamiris, you may resume, but I think we will take a morning break for 15 minutes.

MR. MILLER: May I just inquire, Mr. Chairman as to how much additional cross examination of these witnesses?

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1 suggest who you should bring in.

2 MR. MILLER: Yes.

3 CHAIRMAN BECHHOEFER: It appeared of these two
4 that Mr. Bird would be somewhat more knowledgeable.

5 MS. STAMIRIS: Judge Bechhoefer.

6 CHAIRMAN BECHHOEFER: Yes.

7 MS. STAMIRIS: Regarding that ruling then, when
8 I was explaining where I was going with this, you know,
9 I explained how it related to Item J and I think we have
10 settled that now.

11 CHAIRMAN BECHHOEFER: All right. The other
12 question I might ask, why don't you ask it now, because
13 that may --

14 MS. STAMIRIS: Well, I will ask it now.

15 CHAIRMAN BECHHOEFER: Well, I do not mean right
16 now, but today.

17 MS. STAMIRIS: Okay. But my only -- the ques-
18 tions that I have to ask that have to do with Mr. Turn-
19 bull's actions as documented in letters along with this
20 first audit report, Exhibit 23, they will take -- you
21 know, it will take a little bit of building up to that.
22 I mean, it will be a series of questions. I do not want
23 to simply ask Mr. Marguglio "Did Mr. Turnbull's change
24 in position have anything to do with these items,"
25 because obviously I think he said that he wasn't deeply

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involved in this first audit report; and, secondly, I do not want to just accept an answer of no if that be the case if I have something that I would like to question about.

For that reason, I do not care when I ask my questions, whether it be now or later, but if I ask my questions now, I am preparing you that it will take a series of questions to get there. If I ask my questions later, I do not want to be precluded from asking anything about the organizational change.

In other words, what I am trying to say is I think the questions I have to ask regarding Mr. Turnbull will flow from the Item J cross examination that is going to be postponed until later. If I could also at that time be permitted then to ask a few questions about how it related to the organizational change, then maybe we can put the whole thing off until later. But that's the situation that I am faced with.

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1 MR. MILLER: I don't know what sort of elaborate
2 questions Mrs. Stamiris has, or to the extent they deal
3 with the organizational change, let's get them out on the
4 table now. Mr. Marguglio was here and I do not intend
5 to recall him, unless directed otherwise.

6 CHAIRMAN DECHHOEFER: Why don't you start at
7 least and see to what extent you have to get into the
8 details.

9 BY MS. STAMIRIS:

10 Q Mr. Marguglio, are you familiar with an October
11 15 letter of Mr. Turnbull's which is I believe six pages
12 from the end of the packet of papers in Exhibit 23?

13 A (Witness Marguglio) I just rescanned it during
14 this recent break.

15 Q In his second paragraph when he speaks of
16 Revision 4 of AMPDPFPG 8.1 which deleted a commitment
17 for evaluating the effectiveness of job site training
18 program, are you familiar with that revision?

19 A (Witness Marguglio) Not specifically. But if
20 you read the next paragraph, it obviously was Mr. Turnbull's
21 opinion that Revision 4 was a good thing because he
22 accepted the closure of the unresolved item based on
23 Revision 4 and based on the response that was made by
24 Mr. Smith on October 9, which is also included in this
25 package. Let me see. Yes, three or four pages back.

9-1rt2

1 Q Would you be more specific? I don't know where.

2 A (Witness Marguglic) Well, you just referred
3 me to a letter signed by Mr. Turnbull on October 15.

4 Q Yes.

5 A (Witness Marguglic) If these packages are
6 collated consistently, turn one, two, three, four pages
7 and you should come to a letter from Mr. Smith to Mr.
8 Turnbull dated October 9. And in the second paragraph of
9 that letter Mr. Smith gives his response to unresolved
10 Item No. 1.

11 Now, if we go back to Mr. Turnbull's letter
12 of October 15, we see in the third paragraph of that
13 letter that Mr. Turnbull accepted that response partially
14 on the basis of Revision 4. So I concluded that Mr.
15 Turnbull was satisfied.

16 Do you follow that?

17 Q Yes. But I have to re-read. I follow that.
18 It doesn't say I agree with it. I am not sure. I would
19 have to re-read this and see.

20 This is very difficult without, you know,
21 building up the whole chain of communications back and
22 forth between Bechtel and Mr. Turnbull and others at
23 Consumers that resulted from the original audit. But I'm
24 going to take -- if I'm to do it now, I need to take
25 a minute to read this and see.

-1rt3

1 MR. MILLER: With all due respect, I don't
2 understand what sort of elaborate build-up is necessary
3 to get from these communications, which seem to me to
4 deal with the details of the audit report, to any questions
5 going to the organization or the reorganization. Mrs.
6 Stamiris articulated a question that I would certainly
7 like to hear the answer to and I suspect the Board would
8 too, which is whether Mr. Turnbull -- I think it is whether
9 Mr. Turnbull's performance in connection with this audit
10 report had anything to do with his change in assignment.

11 And I don't know that any elaborate build-up
12 with respect to details of the audit findings is necessary
13 to get to that issue.

14 MS. STAMIRIS: Well, by asking that question
15 we would get to Mr. Marguglio's answer, but we wouldn't
16 get to it by way of viewing the documents which might
17 disagree with his answer.

18 MR. MILLER: Well, excuse me, why don't we get
19 his answer on the record; and then if you have something
20 which you think impeaches it from these documents, let's
21 show it to the witness and get his answer again.

22 MS. STAMIRIS: I avoided asking the question but
23 I didn't want to be closed out then, you know, on the
24 basis of his response. I didn't want to be closed out
25 from pursuing it.

-1rt4

1 MR. MILLER: Well, excuse me, Mr. Chairman.
2 I think that what Mrs. Stamiris hoped to do is get
3 something that she evidently feels that she can argue
4 from these documents, that any answer that Mr. Marguglio
5 gives to the ultimate question with respect to Mr.
6 Turnbull's change of responsibilities is wrong or is not
7 borne out by what's in these documents. That's an
8 argument that she can make in the supplemental findings
9 or whatever.

10 But to tax these witnesses with details of these
11 audit findings and then in order to -- I don't know,
12 somehow spread it on the record as the details of the
13 audit finding, I think is improper. This document is
14 now in evidence and make whatever arguments you wish.

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1 MS. STAMIRIS: I think that part of the dif-
2 ficulty here is that I really don't want to ask Mr.
3 Marguglio for his answer and then attempt to impeach his
4 answer or his testimony because I'm not certainly in a
5 position to -- I mean who am I, without any inside
6 information, to deny what he says is true. I don't think
7 I would be in a position to do that by going through all
8 of this.

9 I think that what I would be able to show by
10 going through some of these things that had to do with
11 how Mr. Turnbull was acting in response to at least
12 these audit findings here, I think would show -- I mean
13 to be very frank, it seems like Mr. Turnbull was trying
14 to do an aggressive job of handling some of these QC
15 matters and some of the problems with how Bechtel was
16 responding.

17 I may or may not be correct in that, but I
18 think that by virtue of the importance of Mr. Turnbull's
19 change to the whole organizational structure, it might
20 be worth reviewing what kind of a job he was doing.

21 MR. MILLER: Well, maybe you ought to ask
22 Mr. Marguglio those questions as to what his evaluation
23 of Mr. Turnbull's handling this issue.

24 CHAIRMAN BECHHOEFER: Why don't you do that
25 in that form. Just because you may get a general answer

1 first doesn't preclude you from exploring it a little bit.
2 BY MS. STAMIRIS:

3 Q Well, are you familiar with Mr. Turnbull's
4 actions in response to the July, June and July audit
5 report?

6 A (Witness Marguglio) Sufficiently I think to
7 respond to any further questions you might have, yes.

8 Q Did you not say a short time ago that your
9 knowledge of this document was fairly limited though?

10 A (Witness Marguglio) No. I said that I re-
11 scanned one of these documents during a break in the
12 discussion.

13 Q To your knowledge did -- do you know or did
14 you ever hear anyone else speak of any relationship
15 between Mr. Turnbull's job performance as reflected in
16 these audits and to the change in his job position?

17 A (Witness Marguglio) In response to the first,
18 the point I would like to make is that I agree with your
19 earlier assessment a moment ago that Mr. Turnbull was
20 aggressively pursuing the Bechtel -- appropriate Bechtel
21 action in response to these resolved items. And I think
22 that his actions were entirely appropriate or at least
23 almost entirely appropriate. There are one or two things
24 that are of very minor nature with which I would disagree.
25 But in general I am very well pleased with the way he

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1 handled this situation.

2 Secondly, there is no connection between his
3 performance in response to this audit and his revised
4 responsibilities in the current organization.

5 Q His performance that you spoke of in regards to
6 this first audit report, was he acting as the QA site
7 superintendent?

8 A (Witness Marguglio) Yes, ma'am.

9 Q In performing those duties?

10 A (Witness Marguglio) Yes.

11 Q Then if he was performing those duties as QA
12 site superintendent in a way that you were pleased with,
13 why would you change it from being the QA site superinten-
14 dent?

15 A (Witness Marguglio) I think the testimony was
16 given in that regard already. But first let me reiterate
17 that my statement about his performance has to do with
18 this audit and his follow-up actions in response to this
19 audit.

20 It was decided to address the organization for
21 a number of reasons: First, there was the recognition
22 that we needed a higher level of management present at
23 the site; namely, my personal presence at the site for
24 the majority of my time. And with the recognition of that
25 need, because of the importance of the job, the state of

9-2, PJ4

1 the job, the criticality of the job at this particular
2 point -- that decision, it was also decided that it would
3 be best to reduce the -- or narrow the lines of communica-
4 tion between myself and the section heads, especially
5 personally I know I wanted to be involved in the detailed
6 day-to-day activities. So that was one factor.

7 The other factor that became abundantly
8 obvious was that the site QA superintendent's job was
9 too large for one person to handle if one also had to
10 get involved in the day-to-day activities in detail and
11 get involved in all of those day-to-day activities in
12 detail. So we decided that that superintendent's job
13 would be abolished. And if I recall at the time this
14 testimony was given, there was a meeting before the
15 bench at which some of the reasons were offered, which
16 I won't go into here.

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1 Q If I'm to follow your answer correctly,
 2 am I correct in understanding you to be saying that when
 3 you proceeded that the site superintendent's job was too
 4 large, that the way you decided to deal with that -- I am
 5 talking about before there were any NRC desires expressed.

6 A (Witness Marguglio) Yes.

7 Q The way you decided to deal with that was to
 8 abolish it?

9 A (Witness Marguglio) No, ma'am, that was only half
 10 of what was done. As I pointed out, the most important
 11 fact of what was done was to name me as the person in
 12 the Midland Project office directly responsible for the
 13 operation of the Midland Project Quality Assurance
 14 Department and to position me for the majority of my time
 15 at the time. And I wouldn't call that half. I would call
 16 that 75, 80 percent or more of the impact of the change.

17 The other portion of the change was to eliminate
 18 the site QA superintendent position and essentially give
 19 to Mr. Turnbull the responsibility for administration and
 20 special projects which I testified was a significant
 21 job in and of itself.

22 Q But aside from the shifting of organizational
 23 responsibilities that you spoke of, you did not, the
 24 Consumers did not, see fit to bring in a new person
 25 until such time as the NRC in essence required it; is that

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1 correct?

2 MR. MILLER: You know, we are now going back
3 over ground that's been plowed at least twice by Mrs.
4 Stamiris and once by me and once by the Board.

5 MR. MARSHALL: I haven't had a chance yet but
6 I will.

7 MR. MILLER: Sure.

8 CHAIRMAN BECHHOEPPER: I think that question has
9 been asked and answered.

10 MS. STAMIRIS: Okay.

11 BY MS. STAMIRIS:

12 Q Did you say -- I know I had a specific question
13 I wanted to ask and I can't remember it. If I can just
14 think for one minute, I might remember it.

15 Regarding the findings in the first audit report
16 which you said you were pleased with the way they were
17 being handled by Mr. Turnbull regarding the Bechtel
18 Consumers Interface on these open issues, do you believe
19 that there was some foot-dragging on the part of Bechtel
20 regarding changes that needed to be made to improve
21 quality control certification?

22 MR. MILLER: I am going to object. I really
23 think that is beyond the scope of any ruling the Board
24 has made with respect to these audit findings, and that
25 subject at the bare minimum is one that has been deferred

9-3rt3

1 for further discussion at a later time.

2 CHAIRMAN ELCHHOEFER: We think the question
3 is within the scope of what we have permitted to be asked
4 about next time, but since Mr. Marguglio won't be here,
5 he certainly can answer it now. So we will overrule the
6 objection.

7 A (Witness Marguglio) Give me a minute to look
8 at the documentation, please.

9 I think that Bechtel had an honest difference of
10 opinion with regard to unresolved Item No. 3. I wouldn't
11 call it foot-dragging on their part at all. I would
12 just call it an honest difference of opinion which they
13 communicated in the letter of October 9 to Mr. Turnbull.

14 The area involved with regard to unresolved
15 Item No. 3 is one for which the situation is very
16 nebulous. Without going into detail with regard to
17 Item No. 3, there are generic industrial matters which
18 are yet to be resolved.

1 CHAIRMAN BECHHOEFER: Would it be in gen-

2 WITNESS MARGUGLIO: The standard M452.6 requir-
3 inspectors to have certain educational and experience
4 levels, so many years of college or so many years of
5 experience. This was the 1973 version and industry couldn't
6 live with those requirements throughout the United States.
7 I know that for a fact because in 1975 through 1977 I
8 was the chairman of the work group responsible for that
9 standard.

10 In 1980 a revision to that standard was issued
11 and the requirements for certain levels of education and
12 for certain levels of experience were deleted in lieu
13 of recommendations, and the emphasis was placed on oral
14 and written and physical demonstration tests of candidates.
15 for inspection certification. That's how things are done
16 now.

17 In recognition that different individuals run
18 the track at different speeds, the emphasis is placed
19 through the testing mechanism, either oral testing,
20 written testing or demonstration testing or a combination
21 of both. The emphasis is placed on that medium or on
22 those media as mechanisms for determining the qualification
23 and certifiability of an individual candidate.

24 So the question arose in this area, you know,
25 the question arose, well, how do you know how much training

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1 to give to an individual relative to his education and
2 experience? It is a totally opinionated question.

3 CHAIRMAN BECHHOEFER: Were there no guidelines
4 or standards?

5 WITNESS MARGUGLIO: There are no guidelines
6 industrywide on that score, as to how much training you
7 get. There are absolutely no guidelines other than in
8 those areas that specifically relate to non-destructive
9 examination as covered in SNT TC-1-A. For example, the
10 radiographic, liquid penetrant, magnetic particle, eddy
11 current and these kinds of things.

12 But in the types of inspections that we are
13 talking about here, there are no guidelines whatsoever.

14 So Mr. Turnbull merely raised a question, you
15 know, how do you know how much education -- I mean how
16 much training to provide to an individual based on that
17 individual's past experience, and the response that we got
18 from Bechtel was about all that one could have expected.

19 Mr. Bird just pointed out that they were Mr.
20 Keating's questions originally and not Mr. Turnbull's,
21 which is a proper correction. Mr. Keating is the one
22 that performed the audit.

23 CHAIRMAN BECHHOEFER: I take it Mr. Turnbull,
24 since he wrote those memos, though --

25 WITNESS BIRD: Mr. Keating had left our employ--

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1 ment sometime after he had done this audit and I assigned
2 Don Turnbull as the most senior guy out there to follow-up
3 to get this all closed out.

4 CHAIRMAN BECHHOEFER: Okay. Let me follow-up a
5 little bit. This, you mentioned this unresolved Item
6 3. Was there not also a difference of opinion between
7 Consumers and Bechtel concerning a commitment to evaluate
8 the effectiveness of the job site training program on an
9 on-going basis? The thing that is referred to in

10 the second paragraph on Mr. Turnbull's October 15 letter.

11 WITNESS BIRD: The difference of opinion was
12 not in the issue itself of whether there needs to be on-
13 going evaluation of the effectiveness of training. The
14 issue was whether the deletion of that one specific
15 document was appropriate or not. There was never a question
16 of whether they were carrying on the evaluation. It was
17 just whether do they have to be there to be sure it is
18 an on-going commitment in a written program.

19 CHAIRMAN BECHHOEFER: I see. So you are saying
20 the deletion of a commitment somehow does not delete
21 the obligation to carry on the activity?

22 WITNESS MARGUGLIO: Or two reasons.

23 WITNESS BIRD: May or may not. You were question-
24 ing that one specific question that it was deleted.

25 WITNESS MARGUGLIO: Any time we have a requirement

10-1rt4

1 to perform training or a requirement to do anything else
2 under the quality assurance program, there is a commitment
3 that is understood. It is like an unwritten warranty,
4 so to speak. It's an employed warranty so to speak that
5 if you have got a requirement, there has got to be a
6 follow-up to assess the requirement, and why single out
7 the responsibility for assessing the effectiveness of
8 something only in the training area?

9 Bechtel could have duplicated that responsibility
10 10,000 times with 10,000 other procedural commitments
11 which they have, and I think that was the underlying
12 basis for their position. They were not trying to tell
13 us that they weren't concerned with the effectiveness of
14 the training. They were simply saying that if they had
15 to write that down in the procedure, they would have
16 to say that they were always concerned with the effective-
17 ness of 9,999 other requirements that they have got
18 and it stands to reason that they are. It is obvious
19 that they are.

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1 CHAIRMAN BECHHOEFER: Well, they weren't here
2 talking about writing it down, though, were they? They
3 were talking about deleting what was already written down.

4 WITNESS MARGUGLIO: I don't have a response to
5 that point other than that was their position.

6 CHAIRMAN BECHHOEFER: Is it also not true that
7 NRC has some special requirements concerning training?

8 WITNESS MARGUGLIO: The requirements concerning
9 training are very general. They are, if I recall cor-
10 rectly, with regard to design and construction phase,
11 they are along the lines that training shall be accom-
12 plished to the extent necessary to assure that the
13 individuals are capable of performing the jobs, along
14 those lines. That's not anywhere near an exact quote,
15 but that's the kind of statement that we are dealing
16 with.

17 Again, with the exception of non-destructive
18 examination personnel, for which the training is very
19 specific.

20 CHAIRMAN BECHHOEFER: Now, to go back to Ms.
21 Stamiris' question, is there any, do you feel that
22 Bechtel was somehow falling down in its responsibilities
23 to have taken the position they did concerning the change
24 from revision 3 to revision 4 concerning the evaluation
25 of the effect of the job training? The same question

1 Ms. Stamiris asked you about the other one.

2 WITNESS MARGUGLIO: Okay. I don't know how
3 to answer this, but there were four unresolved items and
4 two findings. As I said, from my cursory and quick
5 re-reading of this documentation, it looks like the two
6 findings and three of the resolved items were satis-
7 factory closed to Turnbull's satisfaction. This one,
8 with regard to No. 3, was not, and may not be now. I
9 don't know. I would have to check.

10 But I think that it has to be left to super-
11 visory judgment as to how much training an individual
12 gets, because not only is his education and experience
13 a factor in the amount of training, but his ability to
14 pick up, as Bechtel has stated, is a factor. Some per-
15 sons need 30 hours of training to be able to understand
16 the same amount of information that others will under-
17 stand in ten hours. The focus is on the testing of the
18 individual, and essentially what Bechtel does is they
19 offer oral tests, they offer written tests, they offer
20 demonstrations prior to certification and they offer
21 follow-up of the evaluation of the person's on-the-job
22 performance after he has been certified.

23 CHAIRMAN BECHHOEFER: Right. Well, doesn't
24 this second paragraph also refer to the evaluation of
25 the job training program generally rather than on an

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1 individual basis or -- I was reading that as something,
2 somewhat of a more general requirement.

3 WITNESS MARGUGLIO: Yes, it does, but I am not
4 sure I understand your point, sir.

5 CHAIRMAN BECHHOEFER: Well, as a separate
6 requirement -- do you disagree at all with the position
7 Mr. Turnbull took in essentially the second paragraph of
8 the October 15 letter?

9 WITNESS MARGUGLIO: I do not think I either
10 disagree or agree. On one hand I certainly agree that
11 a continuing or periodic at least assessment of the
12 effectiveness of the training is necessary. On the
13 other hand, I certainly can sympathize with the fact that
14 a periodic assessment of all of our responsibilities,
15 procedures is necessary, and that's why we have audits,
16 that's why we have over inspections, that's why we have
17 supervisory reviews. I do not put the weight that
18 evidently Mr. Turnbull did in the reduction of the, you
19 know -- I do not put the weight that Mr. Turnbull did
20 in the deletion of that aspect of the document.

21 CHAIRMAN BECHHOEFER: The fact that Mr. Turnbull
22 apparently put some weight on that and regarded it of some
23 importance, would that have affected Mr. Turnbull's
24 later reassignment?

25 WITNESS MARGUGLIO: Not at all. If there was

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1 going to be any impact, it would have been for failure to
2 bring up points. It certainly wouldn't be for bringing
3 up points.

4 CHAIRMAN BECHHOEFER: Did the relationship that
5 developed between Mr. Turnbull and Bechtel itself, either
6 here or in any other circumstances, have anything to do
7 with the reassignment?

8 WITNESS MARGUGLIO: No. No, not that I can
9 think of. I hesitated just a minute because I haven't
10 even thought of it in that sense and this is the first
11 time I've even thought of it in that sense. Nothing that
12 I can think of.

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CHAIRMAN BECHHOEFER: It has nothing such as well, Mr. Turnbull is a little rough on our contractors, so let's find somebody else?

WITNESS MARGUGLIO: No. No, not at all. No.

CHAIRMAN BECHHOEFER: Miss Stamiris, you can resume.

MS. STAMIRIS: Okay.

BY MS. STAMIRIS:

Q Mr. Marguglio, when you speak of the difficulty with having quantifiable and rigid rules of certification, you spoke of the difficulties that come into play because the inspectors coming into these roles have various levels of education, background, experience and learning ability, which would make it vary for each person.

Well, would it not be a relatively simple matter, at least a more direct way of dealing with it to focus on, instead of the input of what training that quality control inspectors and engineers are going to receive, to focus on the end result or the output of what knowledge and skills they now possess?

MR. MILLER: Excuse me. I am going to have to object. I realize that Mr. Marguglio in response to a question by Mr. Bechhoefer of how a position of how this training matter has evolved over the years, but I really think we are now far removed from any possible

1 relevant subject matter in this proceeding and I ask that
2 the line of questioning be cut off now on the grounds of
3 relevancy.

4 MR. PATON: I agree, Mr. Chairman.

5 MR. MARSHALL: I agree.

6 MR. PATON: I do not see what that is relevant
7 to.

8 CHAIRMAN BECHHOEFER: I think that objection
9 was sustained.

10 BY MS. STAMIRIS:

11 Q Well, in defending Bechtel's position regarding
12 unresolved Item 03, that it was not necessary to have
13 this set objective criteria that Mr. Turnbull was seeking,
14 do you believe that it would be possible to put in some-
15 one's file some kind of objective evidence that would
16 show the training or the qualifications that they had as
17 a result of training that would be more informative than
18 the certificate which is mentioned in the last sentence
19 on the October 15th letter, in the opinion of the
20 certifier based on an unknown criteria, the person is
21 competent?

22 MR. MILLER: Same objection, Mr. Chairman.
23 We are going into details of how qualifications are
24 to be established, quite apart from the resolution of
25 the audit finding reports or anything having to do with

1 quality assurance issues.

2 MS. STAMIRIS: I would just add that --

3 CHAIRMAN BECHHOEFER: Well, I think at the very
4 least that question is not appropriate today, but should
5 be --

6 MS. STAMIRIS: Okay, I would agree that should
7 be asked then in relation to the Item J questions later.

8 CHAIRMAN BECHHOEFER: Right.

9 MS. STAMIRIS: I just asked it because he did
10 make that statement and I wanted him to justify one way
11 or the other the statement that he already made, that
12 you, you know, defending Bechtel's position on that.

13 CHAIRMAN BECHHOEFER: Well, there may be some
14 more questions on that aspect. When the J item comes up,
15 that is pretty much in detail.

16 MS. STAMIRIS: Well, I guess I do not have
17 any more questions at this time that relate to the
18 organizational change.

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Q Does he have any other responsibilities than site quality assurance superintendent or -- yes, answer that question.

A (Witness Marguglio) No.

Q Are there any plans that he will have?

A (Witness Marguglio) No.

MR. PATON: Mr. Chairman, I need just one minute to see if we have any other questions, otherwise I am finished.

(Brief interruption.)

MR. PATON: I just want to ask one last question which can be answered by either witness. That regards Mr. Bird's responsibility before and after January 12, 1982.

Are there any changes in Mr. Bird's responsibilities before and after January 12, 1982?

A (Witness Marguglio) No.

BY MR. PATON:

Q Or the time that he spends at the site?

A (Witness Marguglio) No.

MR. PATON: That is all I have, Mr. Chairman.

JUDGE DECKER: Mr. Miller said this morning that the scope of the over inspection commitment turns out to be much greater than you originally anticipated.

A (Witness Marguglio) Yes, sir.

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1 JUDGE DECKER: I can't remember why he said
2 that. Was it because --

3 MR. MILLER: I will explain why. I think I
4 was anticipating -- the reason that Mr. Gardner would not
5 be available for testimony tomorrow, that was my only
6 purpose in making the comment.

7 JUDGE DECKER: I realize that, but what I am
8 getting at is when you made the commitment to provide
9 the information so that the hearing could deal with that
10 question on the 15th, the week of the 15th, you thought
11 you could handle it. The scope turned out to be larger,
12 so now you feel you can't handle it in that time span.

13 Will you tell me again why? What happened?

14 A (Witness Bird) It actually has to do with
15 Mr. Gardner. When that commitment was made -- and it was
16 made in the context they would like to see us do some-
17 thing -- we thought we could easily do it. We at the
18 time believed there were four inspectors in question and
19 that, in fact, there were at the most dozens of inspection
20 records which those four inspectors would have dealt with.

21 So our commitment was to go out to redo --
22 Consumers redo at the most those dozens of inspections.

23 JUDGE DECKER: What surprises me is that you
24 didn't already know that. Can you respond as to why you
25 didn't know that?

1 A (Witness Bird) Yes, sir, it was purely a
2 matter of -- with the four people -- a best guesstimate
3 from the time frame for which they had their inspection
4 certification to the other ground rule to the point where
5 there was an open non-conformance on those people of how
6 many inspections that they would have done.

7 In fact, the inspection records for the two
8 commodities we are talking about, that is, cable termina-
9 tion and cable pulling, are not filed at all against
10 any way to easily retrieve who the inspectors were.
11 And the only way we know how many total inspections there
12 were was to go through page by page 23 file drawers which
13 are filed by inspection -- excuse me, by table scheme
14 number. And it turned out there was over 2,000 records.

15 JUDGE DECKER: That sounds like a shortcoming
16 in the system to me that it required that sort of an
17 effort to find out just how many inspections were being
18 made by people who were uncertified or inadequately
19 certified or something.

20 Do you plan any sort of change?

21 A (Witness Marguglio) It's not viewed as a short-
22 coming in the system. It's viewed as poor judgment on the
23 part of Echtel when they gave us the information as to
24 how many inspections might be involved. But filing the
25 inspection reports by cable schematic number, essentially

1 by the item of hardware affected, is I think the proper
 2 thing to do. I can't answer why Bechtel estimated
 3 there to have been so few inspections and so few
 4 inspectors involved.

5 All I can say is --

6 JUDGE DECKER: The shortcoming I am talking
 7 about is that apparently neither Bechtel or Consumers
 8 realized how many inspectors and inspections had been
 9 done by people with questionable qualifications.

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2 A (Witness Bird) I would like to respond by
3 saying the commitment that we made was to lay to rest
4 finally the fact that those individuals were, in fact,
5 really qualified to do their job. And the only reason
6 why those four people, which was in the initial population
7 as identified -- that there was just one point in their
8 career where an outside agency, mainly MPQAD, had caught
9 them up in some inspection ineffectiveness. So --

10 JUDGE DECKER: All right. Are you, Mr. Marguglio,
11 now fully satisfied that MPQAD has a good handle on the
12 number of inspectors and inspections they make?

13 A (Witness Marguglio) Yes.

14 JUDGE DECKER: How do you know that? What
15 gives you that assurance?

16 A (Witness Marguglio) We are reviewing 100 per-
17 cent of the inspection records to ascertain the total
18 population of inspection records applicable to the nine
19 inspectors in question. Now, we don't have as a result
20 of this new information that a 100 percent re-inspection
21 of determinations and of the tables that were pulled is
22 appropriate in view of the fact that the population --

23 JUDGE DECKER: You are changing the subject on
24 me.

25 A (Witness Marguglio) Oh, I am sorry.

JUDGE DECKER: I said are you now fully

1 satisfied that you and MPQAD have an adequate way of
2 determining whether or not how many inspections are
3 being made by people of questionable qualification and
4 training, and you said, "Yes" and I asked you how you
5 know. Don't get off on the 100 -- the inspection or
6 whether that's necessary.

7 Now, what you have told me is the only way
8 you can find out is to go through a jillion odd records,
9 23 file drawers. Is that the way it's going to be in
10 the future, or are you going to have a better technique
11 for determining which inspectors are questionably quali-
12 fied and how many inspections they made?

13 MR. MILLER: Judge Decker, I am a little bit
14 confused because I think the question -- there are two
15 issues: One, are the inspectors qualified. And I don't
16 know what the witnesses would respond if you asked them
17 if these electrical quality control inspectors are now
18 qualified.

19 Then the second part of the question seems to
20 me to go to how did the company deal with inspections
21 that were performed in the past by individuals whose
22 qualifications were questionable. And that is what led
23 to this review of the 23 file drawers or whatever the
24 number was.

25 But I'm trying to -- I want to be helpful.

1 JUDGE DECKER: Thank you. My problem, if I
2 can finally state it, is that both Bechtel and Consumers
3 seem to have been surprised at how many inspections were
4 made by questionab'v qualified people. Bechtel gave you
5 apparently a vast underestimate of the job that was there.
6 They apparently didn't have any way of determining -- of
7 having a good handle on this. And apparently you didn't
8 either.

9 That grabs me as something -- a condition that
10 is not too healthy. What I am driving at is there some-
11 thing that has happened since to help both you and Bechtel
12 stay on top of this question.

13 A (Witness Marguglio) Let me try to answer that
14 and then I am going to let Walt answer it also. But
15 understand the setting: We are at an interview with the
16 NRC inspector and at the spur of the moment it's -- we
17 come to a point at which it's recommended that we re-
18 inspect some of the cable terminations and some of the
19 cable pullings that were not -- not some, but all that
20 were made by these inspectors.

21 And there is a Bechtel person in the room, and
22 he offers an estimate of how much work is involved.
23 Based on that estimate, someone else in the room says,
24 "Okay, the company or the MPQAD will make that over-
25 inspection." That kind of spur of the moment type of

1 commitment I am discouraging.

2 I wasn't in the room at the time. If I were,
3 I would have discouraged it. But it was made. And it
4 was made in good faith.

5 I agree with you that I am somewhat surprised
6 also that the individual in question, Ron Bechtel, volun-
7 teered that information when he really didn't have a basis
8 upon which to make a reasonable judgment obviously as it
9 turned out. But nevertheless, it was made. All we are
10 trying to do, Judge Decker, is follow-up on that commit-
11 ment.

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1 JUDGE DECKER: I know that is what you are
2 trying to do. You just said you were somewhat surprised
3 that this Bechtel man offered this estimate because he
4 had no basis for it. That's the heart of my questioning.
5 Why isn't there some basis for it other than having to
6 go through 23 feet of file cabinets to find out just
7 how much inspection is being done by questionably trained
8 inspectors?

9 WITNESS MARGUGLIO: There are essentially two
10 options. One can file the inspection records by --
11 in relation to the equipment or items to which the records
12 apply or one can file the inspection records in relation
13 to the inspection personnel who made the inspections.
14 Industry practice, as far as I know, has been to file
15 the inspection records in relation to the equipment
16 and items to which they apply. I think it is universal.
17 I have never heard of it done in our industry any other
18 way.

19 Now, when a condition arises in which the
20 inspections of a given inspector are questioned because
21 of the potential for that inspector to have been unqual-
22 ified, under that scheme there is no -- of filing the
23 records, there is no choice but to look at all of the
24 records for the given period of time, and that's what we
25 are doing. But I don't consider that to be an inadequacy.

1 I would consider filing the records in terms of the
2 individuals who performed those inspections as being
3 less effective because at the time that we have functional
4 turnover from the constructor to the company, those
5 records for the items and materials which are being turned
6 over are being re-reviewed on an item-by-item, material-
7 by-material basis, and we would have to have the capability
8 to draw from the files those inspection records which
9 apply to the components, items and materials which are
10 being turned over. If we didn't have that capability,
11 we would lose one of our major control points.

12 MR. PATON: Judge Decker, could I ask a question
13 on this same line?

14 JUDGE DECKER: Please do.

15 BY MR. PATON:

16 Q Mr. Marguglio, the original estimate of required
17 over inspections was, I think, 135, something like that?

18 A (Witness Bird) The original number given to us
19 by Bechtel was 18, and also in answer to your question,
20 there was another misunderstanding not on Consumers' part
21 but on Bechtel's part, in that next meeting and later.
22 They didn't quite understand by 100 percent that we meant
23 everything. They didn't catch the 100 percent. They
24 thought they wanted five from everybody and the reason
25 there was three on the fourth guy was that that's all the

1 inspections that they thought he had done at the time.

2 MR. PATON: That is what I was going to develop
3 Judge Decker. I thought I had heard --

4 BY MR. PATON:

5 Q Your understanding is that Bechtel didn't
6 really understand that it was to be 100 percent, that
7 somehow they got the idea that it was a sampling, is that
8 correct?

9 A (Witness Lird) Yes, sir.

10 MR. PATON: Okay.

11 JUDGE DECKER: Well, if I have understood this
12 whole line of questioning, there is no quantitative way
13 at this time and no plans to generate one for either you
14 or Bechtel to have at least a semi-quantitative feel for
15 the fraction of or total number of inspections that are
16 going on today by people of questionable qualifications,
17 is that correct?

18 MR. MILLER: Well, excuse me. May I -- let me
19 ask a question to perhaps clarify this and put it in
20 perspective.

21 BY MR. MILLER:

22 Q Mr. Marguglio or Mr. Bird, to your knowledge
23 are the qualifications of any person performing electrical
24 quality control inspections at the Midland site now open
25 to question?

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A (Witness Bird) Not by us.

A (Witness Marguglio) Well, I would like to modify that.

Q Okay.

A (Witness Marguglio) We are going to have to go back into history.

Q I am talking about right now.

A (Witness Marguglio) Well, right now it's still an open point. In my opinion there is an extremely small chance that there could be some individual unqualified, but based on a rather large amount of data that I have before me, all of the nine inspectors in question appear to be totally qualified for the two things that we are talking about here, terminations and cable pulling. But since the over inspection is still ongoing I chose to be conservative in my response.

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response

1 Q You mean the reason for your qualification was
2 you wanted to wait for the results of the over inspection?

3 A (Witness Marguglio) I've got a large amount of
4 over inspection data in front of me, namely over 500 over-
5 inspections. Over 2,000 have been completed, and in my
6 opinion the statistics are so staggeringly in favor of the
7 qualifications of these individuals that I have very
8 little doubt that any of them will turn out to be unqual-
9 ified.

10 MR. MILLER: I apologize, Judge Decker.

11 JUDGE DECKER: Oh, no, I have no further
12 questions.

13 CHAIRMAN BECHHOEFER: I would like to turn to --

14 WITNESS MARGUGLIO: May I -- Walt Bird just made
15 a point that I think ought to go into the record, if I
16 could just restate his point.

17 We are not making these over inspections because
18 we think that any of these individuals were unqualified.
19 If we thought that, we would have precluded these individual
20 from doing any inspections to begin with. We are making
21 these over inspections to demonstrate to the regulatory
22 people that the inspectors are in fact qualified, to
23 demonstrate to their greater degree of interest,
24 if you will. We are happy to have this information because
25 it confirms our original, you know, information. But I

1 think that it is important to understand that if we had
2 any significant doubt -- and there is always doubt, you
3 know, but any significant doubt, we would stop that
4 inspector from doing any work. I am sorry.

5 CHAIRMAN BECHHOEFER: I was going to turn to
6 Exhibit 21, CPC Exhibit 21, the delegation of authority
7 which I guess is Enclosure 3, and then turn to the section.
8 The first one, I guess will be illustrated by Section 5.1.2,
9 where it says that the manager reports to the director
10 of environmental and quality assurance.

11 My question is, is that really accurate or
12 does the manager report to the director of MPQAD, who
13 happens to be the same person I might add, but I am
14 just wondering how that fits, how that works?

15 WITNESS MARGUGLIO: I think you are correct.
16 He does report to the director of MPQAD.

17 CHAIRMAN BECHHOEFER: The reason I asked that
18 is I didn't see any responsibilities for the director
19 MPQAD. I just saw it as a name on the chart.

20 WITNESS MARGUGLIO: Only because it's one and
21 the same as the director S&QA or E and QA rather.

22 CHAIRMAN BECHHOEFER: Well, my question is
23 are these really two positions or should the chart just
24 reflect one or the other? In your capacity, did you
25 do different things in the two positions?

1 Q In response to Judge Decker you said that
2 regarding the November audit report that you had taken
3 some action in your response to -- I believe it was in
4 response to a concern. Would you describe what you meant
5 by that, if I understood you correctly?

6 A (Witness Marguglio) The November audit report
7 didn't pose any concern to me because that is the December
8 audit -- if I'm correct, Exhibit 23.

9 MR. MILLER: It is 22, Mr. Marguglio. The
10 audit dates are November 2nd through 6th, but the audit
11 report is dated in December.

12 WITNESS MARGUGLIO: Okay. Right, it's 22,
13 Exhibit 22, the audit conducted in early November but
14 reported on in early December didn't pose any concern to
15 me because it was -- it had favorable results.

16 Nevertheless, one of the things that I put down
17 as a personal follow-up item was to assure that the
18 Midland Project Quality Assurance Department overviewed
19 Bechtel quality control personnel certifications in the
20 future. Since that time the Midland Project Quality
21 Assurance Department has overviewed eight such personnel
22 certifications and we have found, in addition to these
23 audit findings, that the certification process employed
24 by Bechtel is consistent with the requirements. ^{ARE THE}
^{PEOPLE}
^{QUALIFIED?}

25 Q Was that overview of their certification

1 process that you spoke of, was it not also raised in the
2 June and July audit report?

3 A (Witness Marguglio) I don't think so. There
4 were two findings in the earlier audit; One finding had
5 to do with whether or not the on-the-job training which
6 is conducted by Bechtel quality control of its personnel
7 should be documented; and although it was not at that time
8 it is now.

9 The other had to do with the responsibility of
10 the level 2 quality control engineer to review the
11 inspection report issued by the level 1 quality control
12 engineer, and now such a review by the level 2 person is
13 conducted and the level 2 person signs the inspection
14 report to indicate he has reviewed it.

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it 1 Q Was the November audit report a follow-up to the
2 June and July audit?

3 A (Witness Marguglio) They were on the same subject
4 but I wouldn't call them a follow-up. It was just another
5 periodic audit of the certification process but it was not
6 a follow-up.

7 Q So it was not intended to ever really refer
8 specifically or close out in any more finality the items
9 of the earlier audit report?

10 A (Witness Marguglio) Not to my understanding.

11 Q Did you believe that the scope of the second
12 audit report was -- well, how -- do you believe that the
13 second audit report was less thorough than the first audit
14 report?

15 A (Witness Marguglio) Not at all.

16 Q Would you explain?

17 A (Witness Marguglio) I think within the scope
18 of the audit, the audit was thorough. I don't know how
19 to explain I guess other than to refer to -- refer you
20 to the second page of Exhibit 2, specifically Paragraph
21 Roman numeral V, C, which describes what was audited
22 and what the results were.

23 Q Did you say that you were -- you had more to
24 do with the second audit than you did with the first
25 audit, is that not correct?

1 A (Witness Marguglio) I said that at the time
2 of the first audit represented by Exhibit 23, my responsi-
3 bility for the Midland Project Quality Assurance were
4 limited, and I previously testified as to what those
5 limitations were.

6 At the time of this audit report, of the issuance
7 of the audit report marked Exhibit 22, my responsibilities
8 were broader. They were full scope responsibilities
9 with regard to quality assurance and, therefore, I viewed
10 this report differently than I did the earlier report.
11 But I'm personally satisfied with both.

12 Q Okay. Can you tell me how you were involved
13 in this second, in the November audit report, what was
14 the scope of your involvement?

15 A (Witness Marguglio) I was --

16 MR.MILLER: I really believe that question was
17 asked and answered by Mr. Marguglio in an answer in
18 response to Mr. Decker.

19 MS. STAMIRIS: Well --

20 CHAIRMAN DECKHOEFER: I think Judge Decker
21 did ask the same question.

22 MS. STAMIRIS: Okay.

23 BY MS. STAMIRIS:

24 Q Then your response, the responses that you gave
25 to Judge Decker as to your involvement with that, there

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1 weren't any others, there aren't any others, any more
2 direct involvement in what you expressed to Judge Decker
3 with this audit report?

4 A (Witness Marguglio) I think Mr. Decker's
5 question was what did I do with this report. Your question
6 may be somewhat different in terms of -- I have to admit --

7 MR. MILLER: I will withdraw my objection.

8 A (Witness Marguglio) It may be somewhat different.
9 She is asking what was my involvement with this audit.

10 MR. MILLER: Okay.

11 A (Witness Marguglio) My involvement started in
12 a meeting with the NRC inspector, at which time I decided
13 we would have an audit of the Bechtel QC certification
14 process.

15 If I recall, the meeting with the NRC inspector
16 may have been in October. I am not absolutely sure of
17 that date. But as you can see, in November there was
18 such an audit. But the audit was at my direction.

19 The remainder of my involvement was at the
20 conclusion of the audit when the audit report was
21 published, as I testified in response to Judge Decker's
22 question.

23 BY MR. STAMIRIS:

24 Q In the October, I think it was 3rd through
25 6th NRC inspection, 8120, in which this Item J was on,

2 pt.4
1 are you familiar with that inspection report and Item J
2 of that inspection report, referring to the audit of
3 Bechtel QC qualifications?

4 A (Witness Marguglio) I think I am. I wish I
5 had it in front of me, but I think I am.

6 CHAIRMAN BECHHOEFER: Off the record.

7 (Discussion off the record.)

8 BY MS. STAMIRIS:

9 Q The statement in that paragraph on Page 4
10 as Item J that says: "In response to Inspection 8112
11 an audit had been performed on the Bechtel QC inspector
12 qualifications." And then there is a statement: "An
13 audit was performed in June, 1981. However, the results
14 of the audit were inconclusive."

15 Can you explain whether that statement that
16 "The results of the audit were inconclusive," was a
17 judgment of the NRC or of the Applicant?

18 A (Witness Marguglio) NRC.
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1 Q And would it be in response to this item that
2 you remember this October meeting with NRC that you spoke
3 of which led to the November audit?

4 A (Witness Marguglio) Yes, it was. I believe it
5 was I who made the commitment.

6 Q Do you have more?

7 A (Witness Marguglio) Well, the commitment was
8 made by either Walt Bird or by me. We have --

9 Q Do you remember what the NRC expressed to you
10 as to why they believed that the earlier audit was
11 inconclusive?

12 A (Witness Marguglio) I don't remember.

13 Do you, Walt?

14 A (Witness Bird) Yeah, I remember.

15 Q Would you explain?

16 A (Witness Bird) The inconclusiveness goes back
17 to being able -- the NRC in complete conscience to be
18 able to sign off of the unresolved item from the May
19 inspection. And the concern that was voiced was they
20 wanted a harder look at the specifics of the examination
21 process that Bechtel goes through to certify the
22 inspectors.

23 Basically we honed in on that in great detail,
24 a large enough look that we, Consumers, with confidence
25 at the end of the audit supposed we could. In fact, we

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1 have been able to say, yes, we do believe that that
2 certification process is in order. And Mr. Gardner has
3 since been back and expressed his satisfaction with that.

4 Q I did not -- I was unable to find any specifics
5 for the basis of that conclusion as to why the certification
6 process was now acceptable by you in this audit and
7 apparently by the NRC.

8 I would like to go back to the first audit
9 report and ask some questions, and I think it will help
10 get where I am going as far as some of the specifics
11 that I would like cleared up. I don't see them being
12 cleared up in the second audit report as you say.
13 So I am sorry for that introduction. But I will ask
14 some questions from the first audit report. On Page 2 --
15 well, the second page of this document of Consumers Exhibit
16 23 is an item E under the following unresolved items
17 which were identified. The first item speaks of the
18 Level 1 and the Level 2 quality control engineers.

19 Mr. Bird, would you briefly define the difference
20 between a Level 1 and a Level 2 quality control engineer?

21 A (Witness Bird) Level 1 is a lesser certifica-
22 tion; in other words, a person with a Level 1 cert-
23 ification has very specifically limited responsibilities
24 as far as his -- what he can do, what he can inspect, the
25 amount of -- the actual scope of his job is a lot less than

1 a Level 2.

2 Q Are there also Level 3 quality control engineers?

3 MR. MILLER: Excuse me, I am going to object,
4 Judge Bechhoefer. We are about I think to plunge into
5 a detailed examination of the early audit report perhaps
6 to compare its findings with the following one or the
7 second audit which was conducted in November. The whole
8 basis for these, the introduction of these documents, was
9 simply to permit the NRC to come forward and describe
10 for the Board and the parties how they closed out one
11 item on an inspection report that was issued in October.
12 That was the Board's ruling of -- well, I have the
13 transcript page number. It was Page 5412 on December 1st,
14 1981.

15 Item J of that inspection report was admitted
16 into evidence. We are about to go into the details of
17 these audit reports with Mr. Bird and Mr. Marguglio, and
18 I don't believe that is really pertinent to anything that
19 is really before the Board. These audit reports get
20 introduced -- this is not the first time this has happened--
21 for one purpose, and then we wind up with hours and hours
22 of examination on the details of the reports. They really
23 have nothing to do with the issue that the Board is
24 attempting to resolve.

25 MR. PATON: Mr. Chairman, it does seem that

-3rt4

1 these have some relation to Item J. I did note that
 2 apparently we have shifted from the change in the QA
 3 organization to Item J. But I do have some -- a little
 4 bit of sympathy with Mrs. Stamiris on this one.

5 If the staff is going to produce a witness later
 6 with respect to Item J -- and I think maybe that was the
 7 matter that she was addressing before -- and these
 8 audit reports are in evidence, which they are as
 9 Applicant's exhibits, maybe the answer is if one of these
 10 witness' was available at the time we take up Item J.
 11 I guess she wants to take up whatever part of Item J these
 12 witnesses are knowledgeable about.

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Consumers
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QA27-0

NONCONFORMANCE REPORT

PROJECTS, ENGINEERING AND CONSTRUCTION -
QUALITY ASSURANCE DEPARTMENT

Priority: 4 Trend: B-3 Start Up: Indeterminate AI: S782 PAGE 1 of 3

6. PROJECT NAME: Midland 1 and 2		7. NONCONFORMING PART NO: NA		8. NONCONFORMING PART NAME: Cable Installation		1. NCR SERIAL NO: S7-01-81-1-045	
9. SERIAL NUMBER: NA		10. ORG. COMMITTING NO: Bechtel Const/QC		11. AREA/LOC. OF NC: Service Water Bldg N/W Valve Pit		2. DATE: 5/6/81	
12. "AS IS" NONCONFORMING CONDITION VERSUS "AS REQUIRED" CONDITION WITH REFS: A. Drawing E-42, Sheet 10B, Rev 4, Paragraph 15, states in part: "Insulated conduit bushings shall be used throughout the installation or T&B insuliner sleeve . . .", PQCI E-4.0, Activity 2.5. Contrary to the above, cable was pulled through conduit LAA017 at box 1AJ643 without an insulated bushing being installed. QC inspector was made aware of the requirement during the cable pull. (The T&B insuliner sleeve was not used either.) (CONTINUED ON ATTACHED SHEET)		13. QA RECOMMENDATION FOR PART CA: A. Construction shall install insulated bushing and delete the incorrectly pulled cable. (LEDavis) B. QC open PQCIs and reinspect in accordance with designated reference criteria. (ESmith) <input type="checkbox"/> NOT REQUIRED <input checked="" type="checkbox"/>		3. DATE OF REV: NA		5. DISTRIBUTION ACTION COPY: LEDavis ESmith	
14. HOLD TAGS APPLIED: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		15. IS PROCESS CA REQUIRED: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		16. DOES NC AFFECT Q-LIST ITEM: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		17. IS NC REPORTABLE PER 50.55(e): YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
18. IS NC REPORTABLE PER PART 21: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		19. IF YES, DATE & TIME OF REPORT TO NRC: NA		20. IF YES, WHO MADE REPORT TO NRC: NA		21. IF YES, NAME OF NRC OFFICIAL TO WHOM REPORTED: NA	
22. NCR ORIGINATED BY: <i>Larry D Seaman</i>		23. WRITTEN EXPIRY REQUIRED BY: May 25, 1981 TO ESTABLISH CA COMPLETION DATE		24. SUPERVISOR'S SIGNATURE/DATE: <i>DRK Keating</i> 5-8-81		25. PART CA DISPOSITION, JUSTIFICATION & COMPLETION DATE:	
26. DESIGN/PROJECT SIG. AUTH. DISP.: NA		27. PMO SIG. AUTH. DISP.: NA		28. PROCUREMENT SIG. CONC. DISP.: NA		29. SIG. OF ORG. RESP. FOR C/A:	
30. FAB/CONST. SIG. AUTH. IMP. DISP.: NA		31. SIG. OF TEST GROUP ACHNOV. CONDITION: NA		32. FOR MAJOR MOD - PLS. SUPP. SIG. AUTH. DISP.: NA		33. QA AUTH. SIG. TO IMPLEMENT DISP.:	
34. METHOD OF PART CA VERIFICATION:							
35. SIG. OF ORG. RESP. FOR PART C/A SIGNIFYING COMPLETION:		36. SIG. VERIFYING PART C/A & HOLD TAG REMOVAL/DATE:		37. NCR CLOSED BY/DATE: (PART & PROCESS CA COMPLETE)			



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NONCONFORMANCE REPORT

PROCESS CORRECTIVE ACTION

PROJECTS, ENGINEERING AND CONSTRUCTION
QUALITY ASSURANCE DEPARTMENT
M-01-9-1-045
NCR SERIAL NUMBER:

PAGE 1 OF 3

36. QA ASSESSMENT OF ROOT CAUSE(S):

1. Construction not working in accordance with Drawing E-42, Sheet 10B, Paragraph 15, and Drawing E-37.
2. QC not inspecting work in accordance with PQCI E-4.0, Activities 1.3, 2.5, 2.6 and 3.1.

39. ACTUAL ROOT CAUSE(S), IF DIFFERENT FROM ABOVE (TO BE COMPLETED BY ORG. RESPONSIBLE FOR PROCESS CA):

40. PROCESS CA REQUIRED FROM:

DESIGN FABRICATION CONSTRUCTION PROCUREMENT INSPECTION
OTHER _____

41. QA RECOMMENDATION FOR PROCESS CA:

1. Cognizant QC personnel to be instructed on the above listed requirements and document training. (ESmith)
2. Cognizant construction personnel to be instructed on the above listed requirements and document training. (LEDavis)

42. PROCESS CA TO BE TAKEN BY ORG(S) CHECKED IN BLOCK 41 & DATE OF COMPLETION:

43. METHOD OF PROCESS CA VERIFICATION:

44. SIG. OF ORG. RESPONSIBLE FOR PROCESS CA SIGNIFYING COMPLETION:

45. PROCESS CA COMPLETION VERIFIED BY/DATE:

NCR: M-01-9-1-045
DATE: 5/6/81
FILE: 16.3.4 and 16.3.6

12. "AS IS" NONCONFORMING CONDITION VS "AS REQUIRED" CONDITION WITH REFS:
(continued)

- B. Cable is to be routed in accordance with Drawing E-37 which is the same as the cable card.
PQCI E-4.0, Activities 1.3, 2.6 and 3.1.

Contrary to the above, cable LAI062B was routed through LAJ 643, LAA017, LAMH005, LAA022 and LATA019 which is not in accordance with the cable card.

This was part of pull package P5048. The QC Inspector and Field Engineering were made aware of the above noted discrepancy during the cable pull. It was noted that there was a second cable with the same cable number, LAI062B, that was routed in accordance with the cable card.



Consumers Power Company

AUDIT FINDING REPORT

Trend Code: B1

PROJECTS, ENGINEERING AND CONSTRUCTION - QUALITY ASSURANCE DEPARTMENT

AI S-629

AS IS CONDITION VERIFIED AS REVISED / AS NEEDED CONDITION WITH APPROVALS:

Per 10CFR50 Appendix B Criteria V and VI, activities affecting quality shall be prescribed by documented instructions or procedures. These documents are to be reviewed for adequacy and approved for release by authorized personnel.

Contrary to the above, conduit installed and accepted by QC is being reworked without a documented and approved procedure.

Deficiency noted with conduit 1BLB003.

1. Is there a re-work procedure now? - NO
2. How is orig. documentation corrected?
3. How does new documentation get into the files?
4. Drawings revised?

APP ID NO:

M-01-02-1-06

PROJ/DEPT. ACRONYM:

BPCo OC & Construction

DATE OF OBSERVATION:

January 27, 1981

THE FINDER:

18.4.3.4.5 18.4.3.6

THE REVIEWER:

WRBird SKT/KJK

JWCook

TCCooke

LHCurtis

MADietrich

DRKeating

GSKeeley

BWMarguglio

REMcCue

DBMiller

JARutgers

DATaggart

DMTurnbull

JLWood

REQUIRED CORRECTIVE ACTION:

A procedure to be documented, reviewed for adequacy, and approved by authorized personnel.

CORRECTIVE ACTION COMPLETION:

Bechtel Field Engineering to issue a documented and approved procedure by February 12, 1981.

DATE OF C/A COMPLETION:

DATE OF C/A EFFECTIVENESS:

ORG. RESP FOR C/A:

Field Engineering

PERSON MAKING C/A CORRECTIVE:

D Scott

NOTES OF VERIFICATION:

*Followup letter being generated -
Reviewed draft letter.*

Field Eng. working to fix unapproved procedure. see copy of procedure.

IS AN REPORTABLE FOR NRC?:

YES NO

IF "YES", DATE OF REPORT TO NRC:

N/A

IF "YES", NAME OF REPORT TO NRC:

N/A

IF "YES", NAME OF NRC OFFICIAL TO WHOM REPORTED:

N/A

IF "YES", WHO MADE REPORT:

N/A

QA SUPERVISOR'S SIGNATURE:

Larry D Seimans L.D.S. 2-13-81

SUPERVISOR'S SIGNATURE:

M. J. Schaeffer 2/13/81 HPL

QA VERIFICATION SIGNATURE:

VERIFICATION DATE: