

PRINCIPAL STAFF		
RA	11/20	ENP
D/RA	✓	CSM 4/3
A/RA		PAO 1/1
BPRP		ISLO
DR:A	✓	1/22
DR:MSP		
DE		
ML		
OL		FILE 1/22

May 13, 1983

Note to: Ross Landsman  
 Ron Cook  
 Ron Gardner  
 Darl Hood

SUBJECT: CPC'S TESTIMONY ON THE CABLE PULLING INCIDENT

I am enclosing CPC's testimony on the cable pulling incident. Please look it over and provide me with your comments. I do not know at this point if we or CPC will go first on this issue. Listed below are questions which I think should be addressed.

- (1) Is there any basis to CPC's assertion that at the March 10 meeting, they did not commit that all to-go underpinning work would be Q-listed unless specifically exempted? (CPC testimony, p. 11)
- (2) Do the Staff's meeting minutes corroborate CPC's belief that there was no commitment made at the meeting? (CPC testimony, p. 11)
- (3) Is there any basis to CPC's belief that instrumentation was not Phase 2 and therefore not required to be Q? (CPC testimony, p. 12)
- (4) Did Region III think that all wiring for the underpinning had been completed? (CPC testimony, p. 13)

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 PDR FOIA  
 RICE84-96 PDR

MAY 18 1983

(5) Why do we believe instrumentation was not "well underway?" (CPC testimony, p. 13)



Michael N. Wilcove  
Attorney, OELD

say that proper controls could be ignored or that NRC approval was unnecessary. Because the fireline relocation was essentially an ancillary task, I do not believe the Company had discussions with NRR concerning it.

Q6. Mr. Mooney, could you please describe your views of the so-called "cable-pulling incident" of March, 1982.

A6. Because I was personally involved in these discussions, I wish to explain my view of the "cable-pulling" incident referenced in the Attachments to Mr. Keepler's testimony. This incident has been the subject of a formal NRC investigation as to whether material false statements were made. I believe that the incident arose because of ineffective communication between the Company and the NRC Staff.

The Company proposed a quality assurance plan for the auxiliary building underpinning work to the NRC in a letter dated January 7, 1982, and at a meeting with Region III on January 12, 1982. Over the next two months, discussions between the Company and the Staff continued regarding which underpinning activities were to be Q-listed.

On March 10, 1982, there was a meeting between Company and NRR and Region III. At this meeting,

Company sought to define those underpinning activities which were considered safety-related and subject to the quality assurance program and therefore needed to be Q-listed. However, the NRC Staff did not accept the classifications proposed by the Company and took the position that all soils activities beginning with Phase 2 work should be Q-listed except for specific items for which it could be shown, in a fashion acceptable to the NRC, that there was a specific basis to justify non-Q treatment.

One area of misunderstanding between the NRC Staff and the Company was the question of whether the Company agreed to the Staff's position at the March 10 meeting. Apparently some NRC Staff members believed that the Company had committed at that meeting that all to-go underpinning work would be Q-listed unless specifically excepted. I and other Company employees believe no such commitment was made. I viewed this meeting as a chance to discuss the issue with the NRC Staff and not as one at which a commitment would be made. I can recall indicating to the NRC Staff that we understood the Staff's request for such a commitment and that we would "get back to them on it." The NRC Staff's meeting minutes do not indicate any such commitment, corroborating my recollection that no commitment was made.



A second area of misunderstanding arose because of the failure to define instrumentation installation as either a part of Phase 1 or Phase 2 of the underpinning work. The NRC Staff's position at the March 10 meeting was that they wanted all underpinning activities beginning with Phase 2 to be Q-listed unless specifically excepted. Since instrumentation had to be installed and functioning before the start of Phase 2 work, the Company believed that the NRC Staff did not require that the installation of underpinning instrumentation be covered by the quality assurance program. The Company had stated that calibration of instruments and checkout of the system would be Q-listed.

A third area of confusion related to the completion status of underpinning instrumentation on March 10 and 12, 1982. At the March 10 meeting, Region III inspectors formed the impression that underpinning instrumentation had been completed. The NRC investigation conducted to review this matter determined that statements made by the Company at the May 10 meeting were understood by several NRC personnel to mean "work had begun without giving a report on the status of completion."

On March 12, 1982, I and others from the Company initiated a telephone call to Region III Staff. During this call, the Company identified a list of items which we

believed could justifiably be treated non-Q. The Region III inspectors were provided a matrix which showed that instrumentation installation was one of the items that was to be non-Q. With no intent to mislead the NRC Staff, but meaning only to inform the Region III inspectors that underpinning instrumentation work had begun, Alan Boos of Bechtel stated, "Our instrumentation is essentially well underway. Wiring has been pulled -- raceway has been installed." The Region III inspectors apparently understood these statements to mean that all wiring for the underpinning instrumentation had been completed, an unintended inference.

The misunderstandings and poor communications of March 10 and 12, 1982 came to light during the March 17-19, 1982 Region III safety inspection. The NRC inspectors discovered that instrumentation installation was in progress, not completed. They then informed the Company that this activity was to be Q. In response, the Company suspended all underpinning instrumentation installation and reclassified the activities as Q.

Subsequent to these events, Mr. Cook had a number of discussions with the NRC Staff Management leading up to a March 30, 1982 meeting with Region III and NRR, at which time the Company committed to Q-listing essentially all of the to-go underpinning work. As a result of the March 30

commitment by Company Management, instrumentation installed and cables pulled without being covered by quality assurance requirements were upgraded to comply with all quality assurance requirements. Since March 30, 1982, all underpinning instrumentation has been installed pursuant to quality program requirements.

FEB 3 1981

*Rose*

*Nuclear  
Records*

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

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

Gentlemen:

Thank you for your letter dated January 12, 1981, which you submitted as your final response to the infraction contained in Inspection Reports No. 50-329/78-03; No. 50-330/78-03 and the NRC review of this item as commented on in Inspection Reports No. 50-329/80-30; No. 50-330/80-31; as well as the CCo final report on the 50.55(e) item "Report on Seismic Cable Tray Supports." Serial Howe-164-78, dated September 8, 1978. Your statement that you are in full compliance is acknowledged. We will review this matter further during a future inspection.

Sincerely,

G. Fiorelli, Chief  
Reactor Construction and  
Engineering Support Branch

cc w/ltr dtd 1/12/81:  
Central Files  
Reproduction Unit NRC 20b  
PDR  
Local PDR  
NSIC  
TIC  
Ronald Callen, Michigan  
Public Service Commission  
Myron M. Cherry

RIII *ret*  
Sutphin/so  
1/28/81

RIII *ret*  
Knop

RIII *8*  
Fiorelli

~~8102250472~~



Consumers  
Power  
Company

*Daniel S. Sutin*

James W Cook  
Vice President - Projects, Engineering  
and Construction

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

January 12, 1981

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

MIDLAND PROJECT - SUPPLEMENTAL RESPONSE TO INFRACTION 50-329/78-03-03;  
50-330/78-03-03 (ERRONEOUS WELD INSPECTION RESULTS ON CABLE TRAY SUPPORTS,  
LOWER CABLE SPREADING ROOM) FILE: 0.4.2 UFI: 73\*60\*13 SERIAL: 11006

- References:
- (a) CCo Response to IR 50-329/78-03, 50-330/78-03;  
Serial Howe-89-78; dated June 7, 1978
  - (b) CCo Final 50.55(e) Report on Seismic Cable Tray  
Supports; Serial Howe-164-78; dated September 8, 1978
  - (c) NRC IE Inspection Report 50-329/80-30, 50-330/80-31

The infraction described above was initially responded to by reference (a). This supplemental response is provided to clarify the record as to the date full compliance was achieved. The initial response indicated that all of the required actions should have been completed by July 1, 1978 and noted that completed corrective actions and the date of full compliance would be stated through submittal of the final 50.55(e) on the Seismic Cable Tray Supports. The final 50.55(e) report was submitted on September 8, 1978 by reference (b), and it stated that all the cable tray support welds in question would be in conformance upon completion of the inspection (and repair as necessary) required by the disposition of Nonconformance Report (NCR 1360) for undercut conditions using the acceptance criteria given in Specification Change Notice No C-304-8003. It was expected that the actions would be completed by November 1, 1978. NCR 1360 had corrective actions accomplished and was closed on November 2, 1978. However, during subsequent review for closure of the infraction in March 1980, an anomaly was observed by the NRC Inspector on the closure of an earlier Bechtel NCR (No 987) associated with the subject. The anomaly was that NCR 987 did not indicate that other necessary rework had been accomplished but only that the oversize welds had been accepted as is. Thus, there was no documented evidence that the necessary rework had been accomplished on other welds identified as nonconforming on NCR 987. This NCR was therefore reopened on March 6, 1980 to address the condition. The NCR was repositioned, had necessary actions accomplished and was closed on October 10, 1980, which now constitutes the date by which full compliance was achieved.

JAN 15 1981

8102250483



The Region III Inspector, during a Site inspection October 7-10, 1980, reviewed the documentation and hardware associated with this infraction and the correction thereof and has determined that we are now in compliance with requirements. This item has remained open with the NRC pending formal notification of when full compliance was actually achieved. This letter constitutes that notification.

*James W. Cook*

DRK/lr

CC: RJCook, NRC Resident Inspector  
Midland Nuclear Plant

*Dick - let's talk  
about this -  
Thanks  
GAB ton*





Consumers  
Power  
Company

James W Cook  
Vice President - Projects, Engineering  
and Construction

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

January 12, 1981

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

MIDLAND PROJECT - SUPPLEMENTAL RESPONSE TO INFRACTION 50-329/78-03-01  
50-330/78-03-03 (ERRONEOUS WELD INSPECTION RESULTS ON CABLE TRAY SUPPORTS,  
LOWER CABLE SPREADING ROOM) FILE: 0.4.2 UFI: 73\*60\*13 SERIAL: 11006

- References: (a) CPCo Response to IR 50-329/78-03, 50-330/78-03;  
Serial Howe-89-78; dated June 7, 1978
- (b) CPCo Final 50.55(e) Report on Seismic Cable Tray  
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JAN 15 1981

8102250483

2pp

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*James W. Cook*

DRK/lr

CC: RJCook, NRC Resident Inspector  
Midland Nuclear Plant

11/25/80

MIDLAND 192

COMMENTS ON CHRONOLOGICAL EVENTS-

"CABLE TRAY SUPPORTS WELOS"

BY: K. NAIDU

CONTENTS:

1. NON COMPLIANCES - NRC R-III REPORTS.
2. NON CONFORMANCE REPORTS
3. 50.55(2) DATA.
4. COMMENTS BY K. NAIDU

NOTE:

SOME ITEMS IN THIS FOLDER ARE  
TAKEN FROM VARIOUS FILES IN THE  
CONSTRUCTION BRANCH AND SHOULD  
BE RETURNED.

Ray Sutphin

Chronological Events on Lower Cabletray

Supports Welds

Inspection during <sup>Noncompliance</sup> March 21 - 23, 1978 (reports 50-329/78-03-03; 50-330/78-03-03) identified an item of noncompliance relative to 10 CFR 50 Appendix B criterion 1X. ~~Two welds~~ NRC inspector visually inspected the welds on the cabletray supports, determined them unacceptable; ~~and~~ the Bechtel QCIRs however indicated that the welds were acceptable.

50.55e reports  
on the same subject

CPCo reported this item as a potential 50.55e item on April 14, 1978.

CPCo interim letter Howe 75-78 dated May 12, 1978 enclosed MCHR 23, ~~dated~~ April 17, 1978 and referenced NCR 987 as open.

CPCo letter Howe 89-78 dated June 7, 1978 <sup>50-329</sup> refers responds to Noncompliance 78-03-03; 50-330/78-03-03 references ~~NCR~~ NCR #1287 and NCR 1306 which were dispositioned as "use-as-is" on May 18, 1978.

Note

The concluding remark in the NRC inspection report states "The inspector recommended that the corrective action to correct the above noncompliance should include a complete reinspection of all the welds in the lower cable spreading room to determine compliance to the drawings.

June 30, 1978 Howe-107-78 interim letter provides status of corrective action being taken. Still talks about NCRs 1287 and 1306 and does not mention corrective action taken on NCR 987.

August 4, 1978 Howe-136-78 interim letter. Evaluates NCRs 1287 and 1306 and states that the matter may not be 50-55c.

September 8, 1978, Howe-164-78 Final 50-55c report. Last sentence reads "All the cable tray ~~welds~~ support welds in question will be

in conformance upon completion  
of the inspection (and repair as  
necessary) required by the  
disposition of NCR 1360 for undercut  
conditions, using the acceptance  
criteria given in SCN No C-304-8003.  
This will be completed by  
November 1, 1978.

Other inspections by K.N. Midterm QA May 11-13, 1979

August 21-23, 1979

September 18-20, 1979

October 10-20, 1979

50-329/80-01 ; 50-330/80-01 January 8-11, 1980

No documented evidence that NCR 987  
"to rework all fillet welds that have  
coarse ripples, high crowns, excessive  
concavity or convexity, and where the  
base metal will be ground and grooved  
grooved to <sup>an</sup> acceptable thickness" was  
accomplished. The contractor  
personnel stated that an engineering



50-329/80-06 ; 50-330/80-06

February 26-28, 1980. Selectively reinspected welds in accessible areas in the cable spreading room which were reported to have been repaired. The inspected welds were accessible, However ~~the~~ licensee could not find records. Licensee stated that repaired welds will be reinspected.

50-329/80-30 ; 50-330/80-31

October 7-10, 15-17, 20-23, 1980.

Provides Chronological order of corrective action  
NCR 987 was reopened March 6, 1980  
and closed on October 9, 1980.

As a result of the above observation, the NRC inspector noted that NCR 987 was reopened on March 6, 1980 because the licensee determined that documentation was unavailable on the rework and reinspection. The welds were reinspected, and QCIR C-304-1545W, Log 62820 dated February 28, 1980 was initiated to reinspect the welds. The results of the reinspection was documented in NCR 987.

NCR 987 was reopened to correct the findings of the reinspection; the licensee stated that since October 13, 1977 several modifications were implemented which did not match with the October 13, 1977 requirements. Records indicate that the findings were corrected and reinspected with the exception of three items. These three items were corrected on October 9, 1980 during the current NRC inspection. The NCR 987 is considered closed as of October 10, 1980.

(Open) Unresolved (329/78-04-01; 330/78-04-01) -

Cable trays and fittings not included in the safety related item list. Coupon samples from installed cable trays and fittings were collected and tested. Test reports have not been issued.

(Open) Unresolved (329/79-12-05; 330/79-12-05) -

A proposal to test the PORV addressing three concerns, namely, leakage, operability, and capacity during discharge of steam, water and two phase mixes. The facility to conduct reliability tests on this valve in addition to the block valve and pressurizer code valve is scheduled to be complete in March 1981; the actual tests will be scheduled thereafter.

(Closed) Unresolved (329/79-12-06; 330/79-12-06) -

It was previously identified that B&W was reevaluating whether the pressurizer spray control valves were safety related. The licensee informed the inspector that a design change was made introducing an auxiliary spray line for which a new specification is being developed. As this new line is considered safety related, the existing valve is not required to be updated.

(Open) Unresolved Item (329/79-12-08; 330/79-12-08) -

It was previously reported that environmental qualification of gaskets and sealants used in HVAC ductwork was not available. Underwriter laboratories in a letter dated September 28, 1970 tested "Hardcast Tape" for flame spread, fuel contributed and smoke developed, and determined it acceptable. A letter from ITT Research Institute dated April 30, 1975 indicates that "Hardcast Tape" was irradiated with cobalt-60 on April 14-16, 1975 and that the irradiated sample was compared with a sample of unirradiated tape; no discoloration, embrittlement, or apparent changes in physical properties were observed.

A certificate of conformance was issued from Minnesota Mining and Manufacturing Company that Weatherban No. 1202 was manufactured in strict conformance

DETAILSPersons ContactedConsumers Power Company

W. R. Bird, Section Head Q.A.E.  
 J. L. Corley, Section Head IE&T  
 \*M. DeWitt, IE&TV  
 E. L. Jones, IE&T  
 D. R. Keating, QA Mechanical Supervisor  
 \*P. K. Kyner, QA Electrical Supervisor  
 D. Miller, PMO  
 \*M. Shaeffer, Q.A.E.

Bechtel Power Corporation

W. L. Barclay, P.F.Q.C.E.  
 A. J. Boos, Construction Engineer  
 P. Corcoran, Resident Assistant Project Engineer  
 \*L. Harrison, QC Inspector  
 J. N. Mayer, Resident Project Engineer  
 P. Frankenburg, QAE  
 E. Smith, Lead QAE  
 \*R. C. Haller, QAE

\*Denotes those who did not attend the exit interview. The inspector also contacted other contractor and licensee personnel during the course of the inspection.

Licensee Action on Previous Inspection Findings

(Open) Noncompliance Item (50-329/78-03-00; 50-330/78-03-03): The NRC inspector, accompanied by licensee representatives, selectively reinspected the welds in accessible areas in the cable spreading room, which were reported to have been repaired. It was determined that the welds were found to be acceptable. The licensee was unable to produce records to indicate that the welds were reinspected. The licensee stated that repaired welds will be reinspected and documented in inspection reports. The NRC inspector will review the results of reinspection during a future inspection.

(Closed) Unresolved Item (50-329/80-01-05; 50-330/80-01-05): During a previous inspection, it was determined that unapproved drawings were utilized to install instrument tubing for safety-related flow transmitters. The licensee documented this matter in a NCR No. M-01-04-Q002. Paragraph 5.3.2 and Section 8 of Specification J218(Q) originally required the completed drawings to be submitted "for review, analysis and

329/80-01  
330/80-01

DETAILS

Persons Contacted

Consumers Power Company Personnel

B. Marguglio, Corporate QA Director  
D. B. Miller, Site Manager  
\*T. C. Cooke, Project Superintendent  
\*J. L. Corley, QA Section Head, IE & TV  
\*D. R. Keating, QA Mechanical Supervisor  
\*D. D. Balinsky, QA Electrical Supervisor  
\*B. H. Peck, Construction Supervision  
\*M. J. Shaeffer, Group Supervisor, QAE  
\*G. T. Black, Jr., QA Engineer  
\*R. G. Wollney, QA Engineer  
\*R. Wheeler, Field Civil Engineer  
\*R. E. McCue, Project Testing  
E. L. Jones, QA Engineer  
P. K. Kyner, QA Electrical Supervisor

Bechtel Power Corporation Personnel

\*A. J. Boos, Project Field Engineer  
\*W. L. Barclay, Project Field QC Engineer  
\*L. M. Brown, QC Engineer  
\*P. Corcoran, Resident Engineer  
\*L. A. Dreisbach, Project QA Engineer  
\*R. C. Hollar, Lead QA Engineer  
\*R. F. Schulman, Resident Civil Engineer  
\*E. Smith, Lead QA Engineer

B & W Personnel

\*V. N. Asgaonkar, Project Manager  
\*R. W. Shope, QC Supervisor

\*Denotes those present at the exit meeting held on January 11, 1980.

The inspectors also contacted other contractor and licensee personnel during the course of the inspection.

Licensee Action on Previous Inspection Findings

(Open) Noncompliance Item (329/78-03-03; 330/78-03-03) The NRC inspectors reviewed the interim and final reports relative to this matter. During discussions with the licensee and Bechtel personnel, the NRC inspectors determined that there was no documented evidence that the field engineering recommendation in NRC 987 "to rework all fillet welds that have coarse ripples, high crowns, excessive concavity or convexity, and where

W. J. Woolley Company

R. A. Maffei, Manager of Engineering

USNRC-RIII

\*\*R. Cook, Resident Inspector

50-329/80-30 ; 50-330/80-31

Other licensee and contractor personnel were contacted during the inspection.

\*Denotes those present at an update meeting.

\*\*Denotes those present at the exit interview.

Licensee Action on Previously Identified Items

(Open) Noncompliance (329/78-03-03; 330/78-03-03) -

The NRC inspector reviewed the following records of training sessions held for Quality Control welding inspectors:

On February 13, 1978 "Training Session on Undersize Fillet Welds" was conducted with approximately 18 attendees.

On March 16, 1978, instruction from PFQCE to all welding inspectors emphasizing visual examination to detect and measure the worst condition in a fillet weld.

On April 16, 1978 two separate training sessions were conducted for about 22 attendees.

NCR 987 dated October 13, 1977 documents several discrepancies in the welds in the Unit 1 cable spreading room. Initial disposition dated November 30, 1977 was to rework the welds to meet the specification requirements. However, this was superceded and corrective action was dispositioned on June 26, 1978 after a reinspection of this NCR and other NCRs. This final report did not expressly state that NCR 987 was closed.

NCR 987 recommends the following two corrective actions:

- a. Rework for all fillet welds that have coarse ripples, high crowns, excessive concavity or convexity, and where the base metal has been ground and grooved to unacceptable thickness.
- b. "Use as is" for all oversize fillet welds that otherwise conform to the specification.

A weld on No. 82 in Unit 1 lower cable spreading room was identified to be porous and had a crater. During a previous inspection, the inspectors could not determine that this weld was repaired and reinspected. The licensee agreed to reexamine this item and provide additional information.



the base metal has been ground and grooved to unacceptable thickness" was in fact accomplished. The contractor personnel after consultations stated that an engineering review was performed on the above unacceptable welds, and concluded the welds "as is" were acceptable. The NRC inspectors informed the licensee that these welds will be reexamined during a subsequent inspection.

(Closed) Noncompliance (330/79-22-02) Control of welding material. The inspector established that Bechtel supervising personnel and craftsmen have been instructed the procedure requirements of handling welding rods.

(Closed) Unresolved item (329/79-17-01 and 330/79-17-02) Welder Qualification Records. The inspector reviewed the qualification records of the welders in question. It was determined that the errors have been corrected and a discrepancy was also corrected immediately. Additionally, the inspector randomly selected qualification records of 30 other welders for review, with no further discrepancies being identified.

(Closed) Unresolved Item (329/79-24-01 and 330/79-24-01) B & W procedure: The inspector reviewed the revised procedure No. 9-WG-107, Revision 3. It was determined that the procedure has been revised to clarify the handling of return unused welding material.

(Closed) Unresolved Item (329/79-24-02) Ground out in pipe: The inspector reviewed a Bechtel letter to Consumers Power Company dated January 3, 1980 stating that the ground in the pipe was examined and no minimum wall thickness was violated. However, why and when it was ground was undeterminable.

(Closed) Unresolved Item (330/79-22-01) Design changes after work is complete: This item became an item of deviation (Section I, paragraph 8).

See 329/80-01-02

330/80-01-03



7-0-0000

SEP 20 1978

50.55e dat April 14, 1978  
Actual date of close out 9/18/78  
cable tray support  
welds

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

Consumers Power Company  
ATTN: Mr. Stephen H. Howell  
Vice President  
1945 West Parnall Road  
Jackson, MI 49201

5 10 78

Gentlemen:

Thank you for your final report dated September 8, 1978, pursuant to 10 CFR 50.55(e) regarding cable tray support welds. We will complete our review of this matter during a future inspection.

Your cooperation with us is appreciated.

Sincerely,

R. F. Heishman, Chief  
Reactor Construction and  
Engineering Support Branch

cc: Central Files  
Reproduction Unit NRC 20b  
PDR  
Local PDR  
NSIC  
TIC  
Ronald Callen, Michigan Public  
Service Commission  
Dr. Wayne E. North  
Myron M. Cherry, Chicago

7810040106

1p.

OFFICE	RIII <i>sdh</i>	<del>RIII</del>	RIII <i>art</i>	<del>RIII</del>	RIII <i>h</i>
SURNAME	Vandel/dec	<del>Maxwell</del>	Hayes	<del>Spessard</del>	Heishman
DATE	9/26/78				9/27

Vandel  
Response due 9/19

Docket No. 50-329  
50-330

Consumers Powers Co.

ATTN: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Gentlemen:

Thank you for your ~~report~~ <sup>final</sup> report dated September 8, 1978  
pursuant to 10 CFR 50.55(e) regarding cable tray support  
welds. We will complete our review of

this matter during a future inspection. ~~OR We will review your~~  
~~final report on this matter upon receipt.~~

Your cooperation with us is appreciated.

Sincerely yours,

R. F. Heishman, Chief  
Reactor Construction and  
Engineering Support Branch

Tdl, Gm 9-15-78  
Maxwell  
Vandel / Cook / Hays / Heishman



Midland Nuclear Plant  
Seismic Cable Tray Supports

Stephen H. Howell  
Vice President

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

September 8, 1978  
Howe-164-78

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

MIDLAND NUCLEAR PLANT  
UNIT NO 1, DOCKET NO 50-329  
UNIT NO 2, DOCKET NO 50-330  
SEISMIC CABLE TRAY SUPPORTS

- Reference:
- 1) Letter, S H Howell to J G Keppler; Midland Nuclear Plant; Unit No 1, Docket No 50-329; Unit No 2, Docket No 50-330; Seismic Cable Tray Supports; Serial Howe-75-78; dated May 12, 1978
  - 2) Letter, S H Howell to J G Keppler; Midland Nuclear Plant; NRC Items of Noncompliance; Inspection Report No 50-329/78-03 and No 50-330/78-03; dated June 7, 1978
  - 3) Letter, S H Howell to J G Keppler; Midland Nuclear Plant; Unit No 1, Docket No 50-329; Unit No 2, Docket No 50-330; Seismic Cable Tray Supports; Serial Howe-107-78; dated June 30, 1978
  - 4) Letter, S H Howell to J G Keppler; Midland Nuclear Plant; Unit No 1, Docket No 50-329; Unit No 2, Docket No 50-330; Seismic Cable Tray Supports; Serial Howe-136-78; dated August 4, 1978

References 1, 3 and 4 were interim 50.55(e) reports. Reference 2 was also related to this subject. This letter is the final 50.55(e) report Reference 4 reported that the last remaining corrective action was the resolution of changes to Specification 7220-C-304. This was accomplished on August 28, 1978 with the approval of Specification Change Notice SCN No C-304-8003 which revises Section 6 dealing with acceptance criteria on welds.

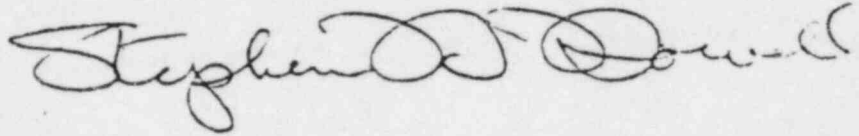
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Howe-164-78

All the cable tray support welds in question will be in conformance upon completion of the inspection (and repair as necessary) required by the ~~disposition of NCR 1360 for undercut conditions~~, using the acceptance criteria given in SCN No C-304-8003. This will be completed by November 1, 1978.

A handwritten signature in cursive script, reading "Stephen D. Dowd".

CC: Director of Office of Inspection & Enforcement  
Att: Mr John G Davis, Acting Director, USNRC (15)

Director, Office of Management  
Information and Program Control, USNRC (1)

Stephen H. Howell  
Vice President



Consumers  
Power  
Company

General Offices: 212 West Michigan Avenue, Jackson, Michigan 49201

May 12, 1978  
Howe-75-78

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

MIDLAND NUCLEAR PLANT -  
UNIT NO. 1, DOCKET NO. 50-329  
UNIT NO. 2, DOCKET NO. 50-330  
SEISMIC CABLE TRAY SUPPORTS

In accordance with the requirements of 10 CFR 50.55(e), this letter constitutes an interim report of the status of nonconforming welds in cable tray supports. Attachments 1 and 2 to this letter provide a description of the nonconforming conditions, corrective action plans and a report of the initial actions taken.

Another report, either interim or final, will be sent on or before June 30, 1978.

- Attachments: 1) Quality Assurance Program Management Corrective Action Report, MCAR-1, Report No. 23, dated April 17, 1978.
- 2) Interim Report #1, dated May 1, 1978, MCAR-23, Cable Tray Support Construction Welding Discrepancy.

CC: Dr Ernst Volgensau, USNRC (15)

Director, Office of Management  
Information and Program Control, USNRC (1)

MAY 15 1978

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9pp.



QUALITY ASSURANCE PROGRAM  
MANAGEMENT CORRECTIVE ACTION REPORT  
MCAR-1

REPORT NO. 23

JOB NO. 7220

Q NO. 3.005

DATE April 17, 1978

I \*DESCRIPTION (Including references):

Seismic Cable Tray Supports were audited by CPCo on August 29, 1977 (F-77-31) and found that welding of raceway supports did not comply with design drawings. The drawings called for transverse welds, and on two type 3 supports, longitudinal welds were used. This was resolved by Specification C-304 revision to allow Field Engineering to approve additional welds.

Bechtel QC performed an inspection of seismic cable tray supports in the Cable Spreading Room Elevation 646 on 10/13/77. There were 59 Hold Tags applied on columns  
(Cont'd)

\*RECOMMENDED ACTION (Optional)

- 1) Project Engineering evaluate the conditions on NCRs 1287 and 1306 and provide disposition.
- 2) Project Engineering determine if the remainder of the fillet welds on electrical supports not reinspected can be deemed adequate without further reinspection or if additional reinspection is required to provide confidence that the as-built condition meets design requirements.
- 3) If reinspection of additional welds is required, Quality Control is to establish a schedule.

(CONT'D.)

REFERRED TO  ENGINEERING  CONSTRUCTION  QA MANAGEMENT  \_\_\_\_\_

\*Potentially Reportable

ISSUED BY J. B. Violette 4/21/78  
Project QA Engineer Date

II REPORTABLE DISCREPANCY

NO  YES

NOTIFIED CLIENT J. E. Bashore 4/13/78  
Project Manager Date

III CAUSE

CORRECTIVE ACTION TAKEN

APR 24 1978  
QUALITY ASSURANCE

AUTHORIZED BY \_\_\_\_\_ Date \_\_\_\_\_

DISTRIBUTION:

Project Manager J. B. Violette  
Construction Manager T. M. Leverette  
Engineering Manager C. L. Richardson  
Project Engineer J. Amaral (Gaithersburg)  
Proj. Supt. / Proj. Const. Mgr. J. E. Bashore (Norwalk)  
or P & I Procurement Mgr.  
Chief Field QC Engineer  
or Procurement Insp. Mgr.  
QA Supervisor  
Client

FORMAL REPORT TO CLIENT \_\_\_\_\_ Date \_\_\_\_\_  
(If Section II Applies)

CORRECTIVE ACTION IMPLEMENTED

VERIFIED BY \_\_\_\_\_ Date \_\_\_\_\_

\* Describe in space provided and attach reference drawings



I DESCRIPTION (Including references): (CONT'D.)

in the lower spreading room because of coarse ripples, high crowns, excessive convexity and undercut. NCR-987 remains open.

Inspection of seismic cable tray support installation was audited by CPCo on December 21, 1977 (F-77-45) and found that fillet welds were undersize and painted. The weld had not been accepted by QC. The action was closed by preparation of a Discrepancy Report to document incomplete work and assurance that welds would not be painted until after inspection.

The NRC performed an inspection on March 21, 1978 and found that cable tray supports in the cable spreading room had several unacceptable fillet welds. This is a potential item of noncompliance, as the inspection report has not been issued as of this date.

Bechtel QC reinspected ten (10) vertical columns consisting of forty (40) welds in the lower spreading room, elevation 646 feet, to determine if the NRC finding is an isolated case. All ten columns were detected to have undersized welds. NCR-1287 was issued March 23, 1978. This reinspection was performed using the same criteria and instructions as the original inspection, but after training of the inspectors by QC on how to measure fillet welds.

The Project Manager called a meeting on 3/24/78 with the Project Engineer, Electrical APE, and the PQAE. A telephone discussion with the Construction Superintendent and the PFQCE resulted in the following action items.

- 1) Construction Superintendent to determine why undersize welds are occurring and to instruct welders on the importance of making welds within specification tolerances.
- 2) PFQCE to perform 100% reinspection of cable tray supports until further notice.
- 3) Project Engineer to determine acceptability of welds, disposition NCR-1287 and determine if a revision to Specification C-304 is required.
- 4) PQAE to review Quality Trend Analysis charts to determine if Discrepancy Reports (DRs) prepared during in-process inspection of electrical cable tray supports involved welding problems.

The PQAE was also to determine if the original inspection was performed before or after Specification C-304 had been revised to include weld size tolerances.

I DESCRIPTION (Including references): (CONT'D.)

A reinspection made on 4/13/78 of completed fillet welds in the lower spreading room, elevation 646 feet, found 550 welds out of 2058 inspected, unacceptable to the latest criteria of Specification C-304, Rev. 3, plus SCH-8002. Rejected welds consisted of oversize, undersize and weld defects. The rejection rate for columns was 50.5%; for unistruts, 12%; and for cross-overs, 27.6%. NCR-1306 was issued April 13, 1978.

The Project Manager called a meeting on 4/20/78 of the Project Superintendent, Chief FQCE, Chief Civil Engineer, M&QS Supervisor, QA Manager, PQAE and other project representatives to discuss the safety aspects of the discrepancy as well as recommend corrective actions. The discrepancy is considered potentially reportable until completion of a structural analysis.

RECOMMENDED ACTION (Optional) (CONT'D.)

- 4) Project Superintendent provide instruction to the responsible crafts, supervision and field engineering personnel to assure they clearly understand the welding requirement. Completion of this action is to be documented.
- 5) Quality Control to evaluate the existing instructions and training for QCEs in this area and take any further actions, if necessary, to assure proper inspection of all future fillet welds. Document results.
- 6) Quality Control to evaluate the need to inspect support welds prior to installation of cable trays. Document the results of the evaluation.
- 7) Request Project Engineering to prepare an interim report and issue to the Project Manager within 15 days (May 1, 1978), containing all available information, together with a statement as to when a complete report will be issued. The interim report is to address clearly the question of reportability.

## Bechtel Associates Professional Corporation

777 East Eisenhower Parkway  
Ann Arbor, Michigan

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



SUBJECT: NCAR #23 (Issued 4/17/78)

Cable tray support construction welding discrepancy

INTERIM REPORT # 1 DATE: 5/1/78

PROJECT: Consumers Power Company Midland Plant Units 1 & 2 Bechtel Job  
7220General

This interim report is prepared in response to Midland Project Management Corrective Action Report No. 23 dated April 17, 1978. Project engineering's action following the issuing of Nonconformance Reports 1287 and 1306 up to May 1, 1978, is summarized in this report.

Engineering Evaluation on NCRs 1287 and 1306

NCR 1287 was issued by Bechtel QC on March 23, 1978. This report contained the reinspection report of 10 vertical columns consisting of 40 welds in the lower spreading room at elevation 646'. All 10 columns detected undersized welds. NCR 1306, issued on April 13, 1978, reported 550 weld discrepancies out of 2,058 inspected welds. The discrepancies consisted of oversize, undersize, and weld defects in the lower cable spreading room. Engineering's evaluation effort is to examine the adequacy of the actual reported weldsize to the specified design load at each connection. Problems related to oversize, weld defect, and violation of AISC minimum weld size were evaluated by Bechtel welding engineers.

There are four groups of typical connectons reported in the NCR 1287 and NCR 1306 as shown in Figures 1 through 4.

Evaluation of the undersized weld is performed by examining the maximum load-carrying capacity of an undersized weld connection to the minimum required load-carrying capacity from structural analysis of the support system. End returns are in general not considered in the design evaluation.

Engineering's evaluation has concluded that both the undersized and oversized welds reported in both NCRs meet design requirements and project design criteria and is not a significant deviation from performance specification. (See CPCo Note 1)

However, for the undersized welds, the minimum weld size required by AISC code was not accomplished and the oversized welds exceeded Specification 7220-C-304 Rev 3 requirements. Engineering is presently evaluating code and specification deviation cases as well as any possible adverse effect to the weld strength.

CPCo Note 1: This paragraph should be interpreted to say that structural design requirements are not violated and the deviation will not affect performance.

Cable Tray Support Welds for Areas Not Reinspected

NCRs 1287 and 1306 reported weld reinspection results limited to the lower spreading room at elevation 646' only. Data obtained from these reports is sufficient to evaluate the weld condition in this area, however, it is inadequate to extend these results to evaluate welding in other areas. This is due to the lack of sampling data obtained from other rooms.

To evaluate welding adequacy in the areas other than those welds in the lower spreading room, project engineering selected a sample of 50 welded support connections from installed cable tray support in the auxiliary building on April 25, 1978. These sample connections required the field quality control group to conduct a detailed inspection and provide results for project engineering to perform similar evaluation. Results of this inspection are still pending as of this date.

Reportability

Project engineering's evaluation to date tentatively indicates that the discrepancy of the weld size as reported in NCR 1287 and NCR 1306 does not present a potential detrimental effect to public safety and is not a reportable condition within the requirements of the Nuclear Quality Assurance Manual, Section 5, Number 10. (See CPCo Note 2).

The final engineering report on this investigation is expected to be completed by May 31, 1978.

CPCo Note 2: *The discrepancy will be treated as reportable by CPCo until such time as the evaluation of the conditions are complete and if final judgment can be made to the contrary.*

Prepared by *Frank Hain*

Reviewed by *H.R. Gwerson*

Approved by *F. Muri - IRLC/Dr. Selantegani*

Concurrence by *Karl Wiedner*

FJH/cap  
5/2/2

Attachments 3



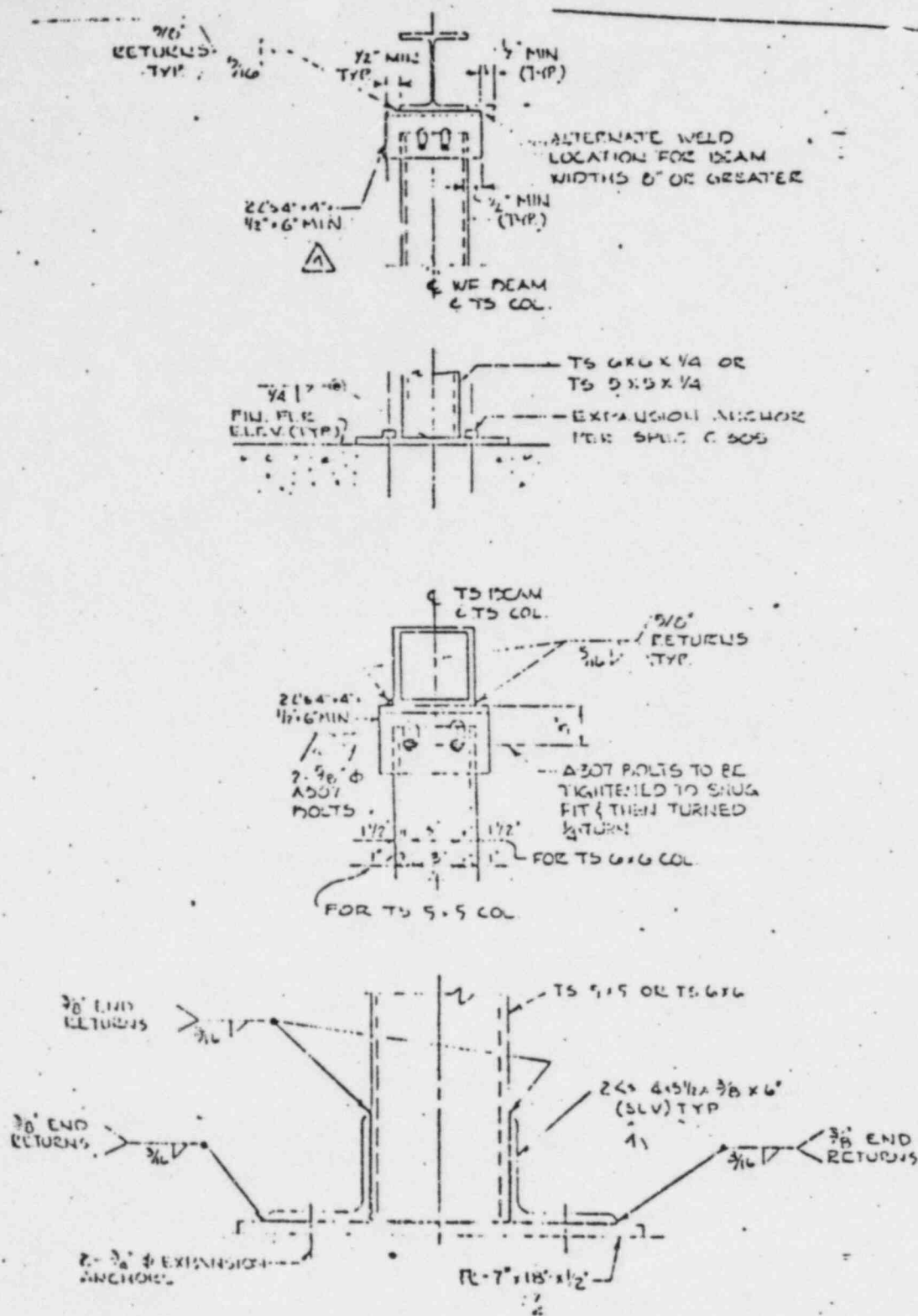


FIG. 1 TYPICAL UPPER & LOWER SUPPORT COLUMN CONNECTION

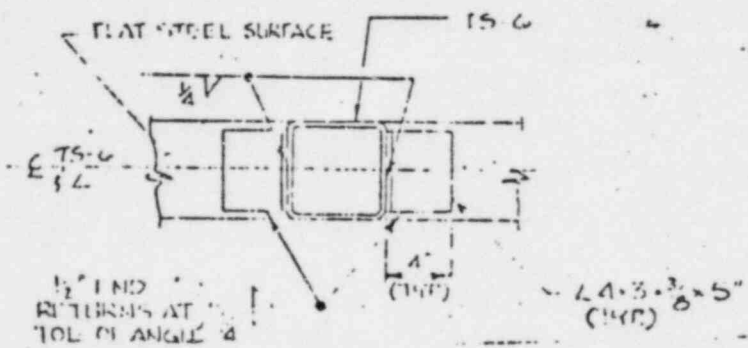
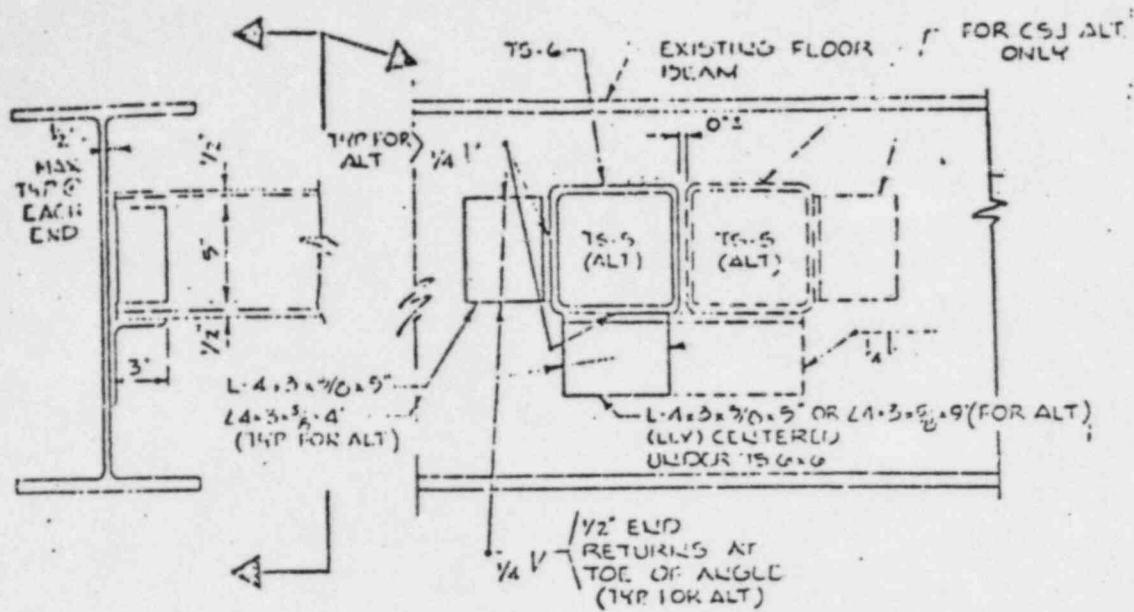


FIG. 2 TYPICAL CROSS OVER BEAM CONNECTION

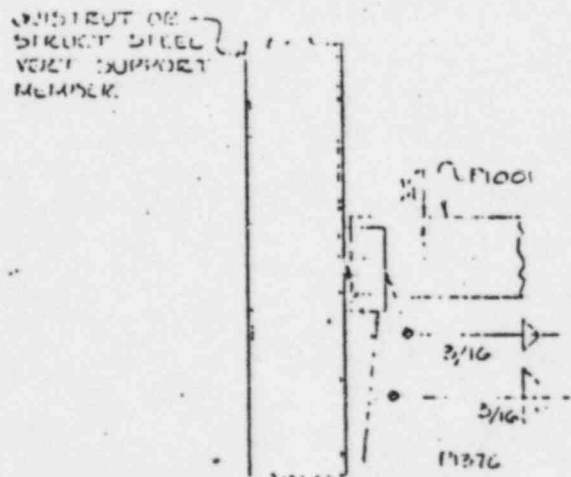


FIG. 3 TYPICAL HORIZONTAL TO VERTICAL STRUCT MEMBER CONNECTION



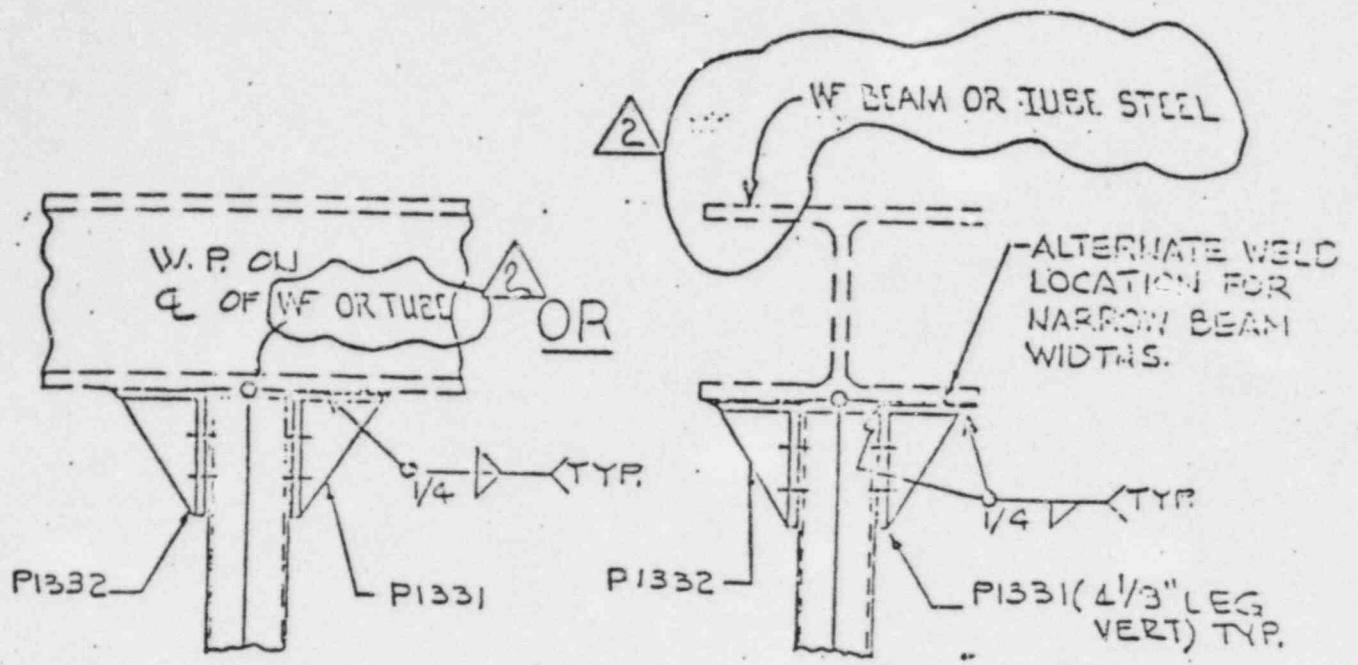


FIG. 4 TYPICAL VERTICAL HANGER CONNECTION



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

MAY 04 1978

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

Consumers Power Company  
ATTN: Mr. Stephen H. Howell  
Vice President  
1945 West Parnall Road  
Jackson, MI 49201

Gentlemen:

This refers to the inspection conducted by Messrs. R. J. Cook, E. W. K. Lee, K. R. Naidu, and T. E. Vandel of this office on March 21-23, 1978, of activities at the Midland Nuclear Power Plant construction site authorized by NRC Construction Permits No. CPPR-81 and No. CPPR-82 and to the discussion of our findings with Messrs. Bird, Corley, others of your staff, and others of the Midland site staff at the conclusion of the inspection.

The enclosed copy of our inspection report identifies areas examined during the inspection. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations, and interviews with personnel.

During this inspection, certain of your activities appeared to be in noncompliance with NRC requirements, as described in the enclosed Appendix A.

This notice is sent to you pursuant to the provisions of Section 2.201 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations. Section 2.201 requires you to submit to this office within thirty days of your receipt of this notice a written statement or explanation in reply, including for each item of non-compliance: (1) corrective action taken and the results achieved; (2) corrective action to be taken to avoid further noncompliance; and (3) the date when full compliance will be achieved.

*Jolene*

*78-03*

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MAY 04 1978

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter, the enclosures, and your response to this letter will be placed in the NRC's Public Document Room, except as follows. If the enclosures contain information that you or your contractors believe to be proprietary, you must apply in writing to this office, within twenty days of your receipt of this letter, to withhold such information from public disclosure. The application must include a full statement of the reasons for which the information is considered proprietary, and should be prepared so that proprietary information identified in the application is contained in an enclosure to the application.

We will gladly discuss any questions you have concerning this inspection.

Sincerely,

R. F. Heishman, Chief  
 Reactor Construction and  
 Engineering Support Branch

Enclosures:

1. Appendix A, Notice of Violation
2. IE Inspection Report  
 No. 50-329/78-03  
 and No. 50-330/78-03

cc w/encl:

Central Files  
 Reproduction Unit NRC 20b  
 PDR  
 Local PDR  
 NSIC  
 TIC  
 Ronald Callen, Michigan Public  
 Service Commission  
 Dr. Wayne E. North  
 Myron M. Cherry, Chicago

OFFICER	RIII <i>[Signature]</i>	RIII <i>[Signature]</i>	RIII <i>[Signature]</i>	RIII <i>[Signature]</i>	RIII <i>[Signature]</i>	RIII <i>[Signature]</i>
SURNAMES	Vandel/bk	Hayes	Wadu	Lee	Danielson	Heishman
DATE	Cook	5/1/78		5/1/78	5/2/78	5/3/78

Appendix A

NOTICE OF VIOLATION

Consumers Power Company

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

Based on the results of NRC inspection on March 21-23, 1978, it appears that certain of your activities were in noncompliance with NRC requirements as noted below. Items 1 and 2 are considered infractions and item 3 is considered a deficiency.

1. Contrary to the requirements of 10 CFR 50, Appendix B, Criterion IX, and Paragraph 5.2 of the Consumers Power Company Quality Assurance Program for Design and Construction, Procedure No. 9-1 it was determined that the documented inspection results, asserting that the welds on cable tray supports in the lower cable spreading room were acceptable, were erroneous.
2. Contrary to the requirements of 10 CFR 50, Appendix B, Criterion IX and Paragraph 5.2 of the Consumers Power Company (CPCo) Quality Assurance Program Procedure for Design and Construction, Procedure 9-1, CPCo failed to assure that Bechtel Welding Procedure Specification No. P1-A-LH Structural specified the welding voltage requirements.
3. Contrary to the requirements of 10 CFR 50, Appendix B, Criterion VII and Paragraph 5.3 of the CPC EPPQSD, Procedure No. 7, CPCo failed to assure that the documentary evidence on purchased material was sufficient to identify that the purchased material met the specification requirements.

~~8006120565~~

U.S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report No. 50-329/78-03; 50-330/78-03

Docket No. 50-329; 50-330

License No. CPPR-81; CPPR-82

Licensee: Consumers Power Company  
1945 West Parnall Road  
Jackson, MI 49201

Facility Name: Midland Nuclear Power Plant, Units 1 and 2

Inspection At: Midland Site, Midland, Michigan

Inspection Conducted: March 21-23, 1978

Inspectors; T. E. Vandell	<i>T. E. Vandell</i>	<u>5/2/78</u>
E. C. Cook	<i>E. C. Cook</i>	<u>5/2/78</u>
K. R. Naidu	<i>K. R. Naidu</i>	<u>5.1.78</u>
E. W. K. Lee	<i>E. W. K. Lee</i>	<u>5/2/78</u>
Approved By: D. W. Hayes, Chief Projects Section	<i>D. W. Hayes</i>	<u>5/2/78</u>

Inspection Summary

Inspection on March 21-23, 1978 (Report No. 50-329/78-03 and 50-330/78-03)

Areas Inspected: Project scheduling of activities through fuel load dates; safety related piping work activities; reactor pressure vessel installation procedures; work activities and record review for containment steel structures and other safety related structures; and followup of previous noncompliance and unresolved matters. The inspection involved a total of 96 inspector-hours onsite by four NRC inspectors.

Results: Of the six areas inspected, no apparent items of noncompliance or deviations were identified in three areas; three apparent items of

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noncompliance were identified in three areas (infraction - failure to accurately document inspection results - Section II, paragraph 6; infraction - failure to assure welding voltage requirements are specified - Section II, paragraph 5; deficiency - failure to assure purchased material documentation included compliance to all specification requirements - previous unresolved item escalated).



## DETAILS

### Persons Contacted

#### Principal Licensee Employees

T. C. Cooke, Project Superintendent  
D. D. Johnson, Construction Control Supervisor  
Z. Johnson, Construction Control Engineer  
G. S. Keeley, Project Manager  
K. R. Kline, Project Control Supervisor  
\*W. R. Bird, Section Head Quality Assurance Engineering  
\*J. L. Corley, Section Head Inspection Evaluation and Test  
Verification  
\*D. R. Keating, Quality Assurance Engineer  
\*B. H. Peck, Construction Supervisor  
\*H. D. Stephens, Quality Assurance Engineer

#### Other Personnel

W. G. Jones, Project Cost and Schedule Supervisor Bechtel  
\*V. N. Asgaonkar, Project Manager B&W  
\*R. W. Shope, Quality Control B&W  
\*W. L. Barclay, Project Field Quality Control Engineer, Bechtel  
\*H. D. Foster, Assistant, Project Field Quality Control Engineer,  
Bechtel  
\*J. L. Hurley, Assistant Project Engineer, Bechtel  
\*W. H. Nielson, Field Engineer, Bechtel  
\*G. L. Richardson, Lead Quality Assurance Engineer, Bechtel

\*Denotes those present at the exit interview.

Other personnel of CPCo & Bechtel were contacted during the course of the inspection.

### Licensee Action on Previous Inspection Findings

(Closed) Unresolved Matter (50-329/77-05; 50-330/77-08): Revision of the Topical QA Program Manual CPC-1-A, Program Policy section, to reflect organizational changes that have occurred. The inspector reviewed Revision 6 of the QA Program Policy section of the manual dated February 7, 1978, and considered the organization chart revisions satisfactory to resolve the concern.

(Closed) Unresolved Item (50-329/77-~~13~~<sup>12</sup>-01; 50-330/77-15-01): It was previously reported that there was inadequate information to verify that the bent containment liner plate referenced in NRC 0094 was repaired. The inspector reviewed field inspection plan C-111-111a, Revision 0, which was reviewed on November 5, 1975. The plan indicates that containment liner plate HRD-9-10 was installed according to drawings. Similarly C-111-111a, Revision 4, dated October 2, 1975, indicates that containment liner plate RD-4-9 was installed according to drawings. The Bechtel personnel stated that no specific repair documents were generated in 1975 and that the liner plates could not have been installed if the bent corners of the liner plates were not straightened. The Bechtel's explanation is accepted.

(Closed) Unresolved Item (50-329/77-~~13~~<sup>12</sup>-02, 50-330/77-15-02): It was previously reported that NCR 0083 identified unapproved heat numbers. The inspector reviewed NCR 0083 which addressed the missing heat numbers on the shipment of wall penetrations supplied by Delta Southern. Quality Action Request (QAR) No. SD-56 initiated on December 9, 1977, and closed on January 16, 1978, identifies that several NCRs initiated during 1971, 1972, and 1973 did not have any provisions to formally close the NCRs. In the case of NCR 0083, the original MTRs were reviewed and the NCR was closed. The inspector reviewed NCR 0084 dated December 17, 1970, to which Standard Certified test reports by U.S. Steel Corporation for Heat Nos. 83E774, 22281, and 68212, were attached. MTR from Phoenix Steel Corporation for Heat No. 60215 was attached to NCR 0085 dated December 17, 1970. Sufficient evidence was available in NCRs 0084 and 0085 to resolve NCR 0083.

Unresolved Item (50-329/77-13-03; 50-330/77-15-03): It was reported in the above inspection reports that UT reports of the above embedment did not provide information in the following three areas.

- a. Whether water was used as a couplant or the object was immersed in water and tested. The licensee stated that water was used as couplant.
- b. The significance of the Bechtel's Shop Inspector's (BSI) Signature on the UT report. Whether it indicates that the BSI witnessed the UT or merely reviewed the UT after it was completed. The licensee stated that the BSI signature on the UT report indicates that he reviewed the test report. Whether he witnessed the test itself could only be determined by examining the "Supplier Quality Surveillance Reports" which are stored in the Bechtel Ann Arbor Office. Bechtel stated that the surveillance reports were not reviewed.

- c. The Distance Amplitude Curve (DAC) did not indicate calibration point; however, the report stated that it was calibrated at 75% full screen height. Further discussions on the subject indicated that the UT required examination for possible laminar tear of a heat affected zone directly below a weld to determine any laminar tear. The DAC curve was not calibrated because only one point namely the 75% of the full screen height was required.

During the initial inspection in December 1977, this embed had been installed in place and rebar was being installed around it. Concrete had not been placed and hence the licensee had the opportunity to reexamine the piece and confirm, if necessary, that there were no tears in the heat affected zone. Bechtel Specification 7220-C-233-Q requires the contractor Willste and Company to submit their UT procedures for approval only if they are doing the UT; approval of UT procedures was not required if a subcontractor performed the UT. In this case, a subcontractor performed the UT; the procedures were not available at site for review. The inspector requested the licensee to make available the UT procedure which was used to perform the NDE. This matter will be further reviewed during a subsequent inspection.

*Open*  
Unresolved Item (50-329/77-13-04; 50-330/77-15-04): It was identified that Shop Welding Inspection Reports of Haven Busch did not document whether root passes which were repaired were reinspected after repair. Bechtel visited the vendor's facility to determine whether any additional records were available. During the visit, it was reported that examination of the available records indicated that only in some instances the reexamination was documented on the reverse side of the report. The reverse side was not copied and sent to the site. There appeared to be a misuse of the documentation of the inspection results; consequently there was not documentation on reinspections. Bechtel is awaiting an assessment by Haven Busch as to the extent of inadequate documentation, including a reasonable rationale to justify the inadequate documentation. This information is expected to be reviewed by the Bechtel Project Engineering personnel through the Project Supplier Quality Supervisor. It should be noted that in the meantime some of these embeds would be buried under concrete precluding further inspections.

*to NDE*  
This item has been escalated to an item of noncompliance contrary to 10 CFR 50, Appendix B, Criterion VII and Paragraph 5.3 of the Consumers Power Company EPPQASD Procedure No. 7. (50-329/78-03-01; 50-330/78-03-01)

(Closed) Unresolved Item (50-329/77-<sup>12</sup>~~13~~-05; 50-330/77-15-05): It was previously identified that several G-321-D forms related to certain components, were signed by the Bechtel Shop inspector even though there

were deficiencies in the records. Bechtel was requested to explain the significance of the shop inspector's signature on the G-321-D form. During this inspection, the RIII inspector reviewed a letter from the Bechtel Ann Arbor office to the Midland QA Lead Engineer, dated December 20, 1977, which in essence concludes that "there are no specific, written instructions for the requirements for completing Line 22 of the G-321-D since the entire Bechtel Supplier Quality Manual is applicable and each G-321-D may have unique project or client requirements." The shop inspector performs only surveillance inspection and the majority of that is on a random or sampling basis. The inspector has no further questions.

#### Other Inspection Areas

##### 1. Licensee/NRR Facility Construction Scheduling Meeting

A construction scheduling meeting was held at the Midland facility site on March 21 and 22, 1978, with the following personnel in attendance:

#### Nuclear Regulatory Commission (NRC)

R. J. Cook, RIII Inspection  
L. P. Crocker, NRR/DPM  
D. S. Hood, NRR/DPM  
W. H. Lovelace, MIPC  
T. E. Vandell, RIII Project Inspector

#### Consumers Power Company (CPCo)

T. C. Cooke, Project Superintendent  
D. D. Johnson, Construction Control Supervisor  
G. S. Keeley, Project Manager  
K. R. Kline, Project Control Supervisor

#### Bechtel Associates Professional Corporation (Bechtel)

W. G. Jones, Project Cost and Scheduling Supervisor

The facility scheduling philosophy for completion of Units 1 and 2 as scheduled for fuel load dates of November 1980 for Unit 2 and November 1981 for Unit 1 was presented and discussed. Mr. Lovelace of the Office of Management Information and Program Control presented their facility scheduling experience and Methodology for Fuel Load Date Forecast.

2. Reportable Deficiencies (50.55(e))

During the inspection the licensee discussed the following reported deficiencies:

- a. The licensee performed an NDE records audit of the radiography performed on the decay heat removal pumps based on information from B&W Canada Ltd. that indicated some irregularities existed in the radiographic techniques used by the nondestructive test subcontractor in the examination of the pumps. The NDE audit revealed several discrepancies which required all decay heat removal pumps to be returned to the pumps manufacturers for additional radiography and repairs if necessary. The licensee stated that their NDE personnel were reviewing the reexamination and any subsequent repairs of the decay heat removal pumps.
- b. The licensee has been informed via a design change that seismic supports for the containment spray system piping located in the containment dome were welded directly to the pipe without benefit of load distribution pads. This would allow stresses in excess of ASME Code allowable to be induced in the spray piping. The licensee is presently involved in evaluating the extent of repairs necessary to rectify the potentially overstressed conditions of the containment spray system.



## SECTION I

Prepared By: E. W. K. Lee

Reviewed By: D. H. Danielson, Chief  
Engineering Support Section 2

### 1. Reactor Vessel Installation - Review of QA Procedures

The inspector reviewed Babcock and Wilcox Construction Company (B&WCC) QA Manual, Rev. 0 dated November 4, 1977, three B&WCC Field Construction Procedures and three Reliance Truck Company Procedures relative to the installation of the Reactor Vessel. The procedures reviewed included testing, handling, placement, leveling, setting and cleanliness preservation. The inspector determined that the QA Manual met 10 CFR 50, Appendix B requirements and the procedures are acceptable and good construction practices were adhered to.

No items of noncompliance or deviations were identified.

### 2. Safety Related Piping - Observation of Work and Work Activities

The inspector observed the following safety related piping work activities:

- a. Handling and protection of Unit 1 Auxiliary Feedwater System Spool No. IDBC-5-S-633-7-2.
- b. Weld end preparation of Unit 1 Auxiliary Feedwater System field weld No. 8C1 on drawing No. M633, sheet 4.
- c. Installation and alignment of Unit 2 Feedwater System flued head No. 2238.

The inspector determined that work activities were performed in accordance with the applicable procedures and good construction practices were adhered to.

No items of noncompliance or deviations were identified.



3. Safety Related Piping (Welding) - Observation of Work and Work Activities

a. Joint Preparation and Alignment

The inspector observed fit-up of Unit 1 Decay Heat Removal System field weld No. 1 on drawing No. M610, sheet 6 and Auxiliary Feedwater System field weld No. 8C1 on drawing No. M633, sheet 4. It was determined the joint alignment met the applicable code requirements and QC verified the alignment prior to welding.

b. Welding of Root Pass

The inspector observed welding of root pass of Unit 1 Decay Heat Removal System field weld No. 1 on drawing M610, sheet 6 and Auxiliary Feedwater System field weld No. 8C1 on drawing No. M633, sheet 4. It was determined that: (1) proper welding procedure was used, (2) welders were currently qualified and (3) physical appearances were acceptable.

c. Welding Beyond Root Pass

The inspector observed welding of Unit 1 Component Cooling Water System field weld No. 59 on drawing No. M616, sheet 6, Auxiliary Feedwater System field welds No. 19C1 and No. 8C1 on drawing No. M633, sheet 4. It was determined that: (1) applicable welding procedure was used, (2) welders were currently qualified, (3) welding procedure requirements were met and (4) work area is free of weld rod-stubs.

d. Storage and Control of Welding Materials

The inspector visited the welding material issuing location at Unit 1. It was determined that: (1) the welding materials are properly identified and segregated, (2) the temperature of the rod ovens is maintained, (3) records are properly kept and (4) issuance and return of welding materials are controlled.

No items of noncompliance or deviations were identified.

SECTION II

Prepared By: K. R. Naidu

Reviewed By: D. H. Danielson, Chief  
Engineering Support Section 2

1. Review of Containment Structural Steel Supports Records (Unit 2)

The inspector reviewed the records relative to the structural steel beams 209 B1, 212 B1, 212 B2, and 220 B1 which form the supports for the core flooding tank. Material Receiving Report (MRR) AEO-1204 dated January 12, 1976, indicates the following:

- a. Beams 209 B1, 212 B1, 212 B2, and 220 B1 were visually inspected and determined acceptable on January 12, 1975.
- b. Field Inspection Plan C-38-R-58, Revision 0, indicates that the material was purchased to Material Requisition 7220/C-38, title "Structural Steel for Auxiliary Building Above Elevation + 603'." In response to a question why reactor building structural steel was purchased under the requisition for auxiliary building structural steel, the Bechtel representative stated, that this was additional material which was ordered against the specification.
- c. Preparation and painting record dated December 4, 1975, documents that surface preparation and painting (Carbo Zinc-11) was inspected by inspector No. 82.
- d. Material certifications identify the steel beams with heat numbers as indicated below:

<u>Beam</u>	<u>Heat Number</u>
209 B1	180T5 82
212 B1	181T0 42
212 B2	181T0 42
220 B1	181T0 42

Material certifications certified that the above beams conformed to the requirements of ASTM-A-36-74.

- e. Test Reports indicate that MT inspections were performed on selected welds by W. H. Flood and Company.

- f. Stiffening plates were welded to some of the above beams in the field to serve as reinforcement. Documentation on the stiffening plates were not available onsite during the inspection. The inspector stated that lack of documentation would be considered an unresolved item. (50-329/78-03-04; 50-330/78-03-04)

No items of noncompliance or deviations were identified in the above areas.

2. Observation of Containment Structural Steel Support Welding Activities (Unit 2)

The inspector observed structural steel support welding activities relative to the core flood tanks.

- a. Weld on Beams 209 B1 to 212 B1 was identified to be performed by weldor I95; weld on Beams B212 B2 to .09 B1 was identified to be performed by weldor I25. Quality Control Inspection Records (QCIR) indicate that the fitup was checked. Weldor qualification records indicate that weldors identified as I95 and I25 were qualified to the procedures used.
- b. Weldrods were being stored at the work location in portable electrode ovens.
- c. Uncontrolled weldrod was not observed at this work location.
- d. Two QC welding inspectors were assigned to inspect ongoing activities in the Unit 2 reactor building area.

No items of noncompliance or deviations were identified in the above areas.

3. Review of Containment Structural Steel Supports Welding Records (Unit 2)

The inspector reviewed QCIR No. C 304-543 which covered the inspections on the welding performed on the splice on column 3 adjacent to the core flooding tanks and determined the following:

- a. The welds on the east side and west side of the column were visually inspected for weld size, length, location, contour, and surface and were determined acceptable.
- b. Heat treatment and NDE were not specified.

- c. Weld procedure P1-A-LH Structural was specified.
- d. Welder identified as I30 performed the welding; records indicate that the welder was qualified to weld to procedure P1-A-LH Structural.
- e. Fit up was checked and released on March 16, 1978.
- f. Back gouge was inspected and released for welding.
- g. Final inspection was performed on March 17, 1978, and determined acceptable.

No items of noncompliance or deviations were identified in the above areas.

4. Observation of Inadequate Concrete Cover on Steam Generator Pedestals (Unit 2)

On March 22, 1978, the inspector observed that several rebars on the inner peripheries of the steam generator pedestals were exposed due to inadequate concrete cover. The relevant drawings were:

C-360Q, Reinforced Concrete Sections and Details, Sheet 2, Revision 10, dated January 6, 1978.

C-355Q, Reinforced Concrete Plan at Elevation 593'-6", Revision 6, dated February 19, 1978.

The inadequate concrete cover was documented in Field Change Request (FCR) C-1072 dated August 10, 1977, and identifies that both the north and south Unit 2 steam generator curbs had concrete cover problems on all three sides. The cover problems on the inside and outside edges were attributed to an incorrect layout of drill holes for the grouted ties. That the rebar protruded too high was attributed to Revision 4 of drawing C-360 which added 8 drilled and grouted ties on top of the original curb ties (embedded in the base slab) but kept the top of the curb at elevation 594'-9". The field requested change was to increase the top of the steam generator curbs to elevation 594'-11" and fill the inside of the curb to certain dimensions specified with 5000 psi grout. This change was approved by Bechtel Resident Engineer on August 15, 1977.

The corrective action will be completed after the sole plates are installed. Corrective action recommended appears to be acceptable.

No items of noncompliance or deviations were identified in the above areas.

5. Review of Welding Procedure PI-A-LH Structural

The inspector reviewed Bechtel Welding Procedure Specification (WPS) PI-A-LH Structural which was being used to weld structural steel and determined that the welding voltage requirements were not specified. The above WPS referenced a General Welding Procedure (GWP) which was to be used in conjunction with the WPS PI-A-LH Structural. Paragraph 4.2.1, on Sheet 3 of 18, of the GWP Revision 2, dated September 1, 1977, states "Electrical process variables shall be specified in the applicable WPS." The Bechtel personnel informed the inspector that the welding voltage was never measured and recorded. American Welding Society (AWS) D1.1-1972 code which was referenced in the WPS in Section 4, Paragraph 4.10.2, states "The classification and size of the electrode, arc length, voltage, and amperage shall be suited to the thickness of the material. . . ."

Also, in Section 5, Paragraph 5.5.2.1(4), the AWS Code states "A change of more than 15% above or below the specified mean arc voltage and amperage for each size electrode used is considered a change in the essential variable and requires establishing a procedure qualification." The inspector stated that the control of welding was considered inadequate in that the welding voltage was not specified in the WPS and that this was contrary to 10 CFR 50, Appendix B, Criterion IX and Paragraph 5.2 of the Consumers Power Company Quality Assurance Program Procedure for Design and Construction Procedure 9-1.

This is an item of noncompliance identified in Appendix A. (50-329/78-03-02; 50-330/78-03-02)

6. Observation of Electrical Cable Tray Welds

The inspector observed the welds on the seismic Class 1 cable tray supports in the lower cable spreading room at elevation 646' in the auxiliary building and noted that several welds were inadequate in size. At the request of the RIII inspector welds on Column 19, which were documented as inspected and acceptable in QCIR-C304-244W, were reinspected and the results documented as follows in Bechtel Discrepancy Log W097:



- a. Welds on Column 19 where attachment is made to structural steel are required to be 5/16" size with a 5/8" return, by Detail 3 of Drawing E740(Q). Reinspection by the Bechtel QC inspector indicated the following as welded conditions:

(1) Weld Southwest Side

Leg 1/4" x 5/16"  
one end return undersize  
one end return short

(2) Weld Northwest Side

Undersize throat, complete length of the weld  
one end return short

(3) Weld Southeast Side

Legs 1/4" x 5/16"  
one end return short  
one end return undersize

(4) Weld Northeast Side

Undersize throat, complete length of the weld

The inspector stated that QCIR-C304-244W was in error in that the reinspection results established that the welds did not meet the criteria established in Drawing E 740 (Q). The inspector further stated that this is considered an item of noncompliance and is contrary to 10 CFR 50, Appendix B, Criterion IX and Paragraph 5.2 of the Consumers Power Company Quality Assurance Program Procedure for Design and Construction Procedure 9-1. The inspector recommended that corrective action to correct the above noncompliance should include a complete reinspection of all the welds in the lower cable spreading room to determine compliance with the relevant drawings. (50-329/78-03-03; 50-330/78-03-03)

Furthermore, the inspector observed that additional work, such as installation of cable trays to attachments that had been welded to various structures, had taken place even though the welds had not been inspected.

Selected welds were reinspected at the request of the RIII inspectors. The QC inspector determined that some of the



welds were nonconforming. The inspector noted that a system should be developed and implemented to perform timely inspections of welds to preclude installations of items on attachments with nonconforming weldments. The licensee agreed to review this matter. This is considered an unresolved item. (50-329/78-03-05; 50-330/78-03-05)

*6/11/80 lwh*  
*(3)*

Except as noted, no items of noncompliance or deviations were identified in the above areas.

#### Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance or deviations. An unresolved item disclosed during the inspection was discussed in Section II, Paragraphs 1.f and 6.

#### Exit Interview

The inspectors met with licensee representatives (denoted under Persons Contacted) March 23, 1978 at the conclusion of the inspection and summarized the scope and findings of the inspection. Licensee comments are noted in the applicable sections of this report.