

Stephen H. Howell
Vice President



Consumers
Power
Company

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

March 30, 1978
Howe-36-78

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

RECEIVED DISTRIBUTION
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MIDLAND NUCLEAR PLANT -
UNIT NO. 1, DOCKET NO. 50-329
UNIT NO. 2, DOCKET NO. 50-330
PIPE SUPPORT FILLET WELDS

THIS DOCUMENT CONTAINS
POOR QUALITY PAGES

- 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; Pipe Support Fillet Welds, Serial Howe-197-77, dated November 21, 1977
 - 2) 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; Pipe Support Fillet Welds, Serial Howe-214-77, dated December 22, 1977
 - 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; Pipe Support Fillet Welds, Serial Howe-11-78, dated February 10, 1978.

The referenced letters were interim reports. This letter is also an interim report. Attachments 1 and 2 provide Bechtel Associates' interim reports in response to the Management Corrective Action Reports (MCAR-1 Report No. 18 and MCAR-1 Report No. 19). Attachment 3 is Bechtel's Quality Assurance Program Management Corrective Action Report (MCAR-21) which addresses undersized field welds. The Project Engineering response to MCAR-21 will be included in our next 50.55(e) report.

ITT Grinnell submitted to Bechtel Associates' Professional Corporation two engineering reports for review, one dealing with stress analysis of as-built weld configurations as found in a field survey and the second one providing the results of specific testing and a general history of Grinnell's experience with the type of welding in question. These reports support a conclusion that the hanger welds will not fail in service. Consumers Power and Bechtel, after review of these reports, agreed that additional work is necessary to strengthen the justification for an "accept as is" disposition. A meeting will be held by early April with ITT Grinnell to determine the further actions required.

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Bechtel

2.
Howe-36-78

Another interim or final report will be sent on or before May 31, 1978.

Stephen D. Donald

- Attachments: 1) Interim Report No. 4 dated February 24, 1978,
MCAR-18
- 2) Interim Report No. 4 dated February 24, 1978,
MCAR-19
- 3) Quality Assurance Program, Management Corrective
Action Report, MCAR-1, Report No. 21

CC: Dr Ernst Volgenau, USNRC (15)

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

SUBJECT: MCAR # 18 (Issued 10-28-77)

INTERIM REPORT # 4

DATE: 2-24-78

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

Status of Corrective Action and Investigation

Grinnell is proceeding with preparation of the test report. Three additional load tests will be included.

To establish the actual quantity of underspecified fillet welds, Bechtel is reviewing all ASME hanger sketches originally engineered prior to May 1, 1978, the date Grinnell acknowledges full compliance with the code fillet weld size requirements.

Forecast Dates on Corrective Actions

Grinnell has committed to submit a preliminary copy of its test report by the end of February. The recent severe weather that paralyzed the east coast forced Grinnell engineering at Providence to shut down for nearly 10 days which will probably cause some slippage in concluding this MCAR.

Bechtel will complete the underdesignated weld callout survey in February.

Submitted by: V. Karsick

Approved by: R.C. / H. Belmont

Concurrence by: Karl Wiedner

SUBJECT: MCAR # 19 (Issued 11-7-77)

Attachment 2
Howe-36-78

INTERIM REPORT # 4

DATE: 2-24-78

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

Status of Corrective Action and Investigation

On February 13, 1978, Bechtel received Grinnell's analytical analysis report on the 36 shop welds found underfabricated by Bechtel field QA personnel on random sample of 125 hangers. This report is presently being reviewed by Bechtel.

Bechtel is currently providing an estimate of the number of underfabricated shop welds existing on hangers shipped by Grinnell to the field through August 1977. This estimate will also include the cost of reworking and the factors on which the estimate was based.

Forecast Date on Corrective Action

Bechtel's estimate of the number of underfabricated shop welds and the cost of their rework will be completed by the end of February 1978.

Review of the Grinnell analysis on underfabricated welds will be completed with a disposition on applicability by March 17, 1978.

Submitted by: V. W. Hawick

Approved by: R. C. [Signature]

Concurrence by: Karl [Signature]

QUALITY ASSURANCE PROGRAM
MANAGEMENT CORRECTIVE ACTION REPORT
MCAR-1



JOB NO. 7220

P.O. 7220-M-106
Q NO. Various

REPORT NO. 21
DATE 2/28/78

I *DESCRIPTION (Including references):

As part of the investigation to determine the extent of fillet weld size discrepancies associated with hanger fabrication and identified in MCAR 18 and 19, a reinspection, using a weld fillet gauge, was conducted by Quality Control of a sample of 80 completed hangers consisting of 300 field welds. This sample represents 10% of the Q-listed hangers with field fillet welds installed to date. The reinspection was for the purpose of determining the actual field weld size compared to Grinnell design and sketches. It was discovered that contrary to the specified field weld size required by Grinnell drawings, the actual field weld size

*RECOMMENDED ACTION (Optional)

- 1) Determine the cause of the deviation.
- 2) Request Project Engineering to evaluate the nonconforming conditions and determine whether or not the worst probable case for undersized configuration has been identified. If not, instruct Quality Control accordingly to expand their sample to include the worst case configuration.
- 3) Have Quality Control conduct additional reinspection of the field welds of the remaining installed hangers depending on Project Engineering's disposition of (cont'd.)

REFERRED TO ENGINEERING CONSTRUCTION QA MANAGEMENT

*Potentially Reportable

**Reported by CCo as part of fillet weld problem by letter (Howe-197-77) dated 11/21/77 to NRC.

ISSUED BY J. Richardson 2/24/78
Project QA Engineer Date

II REPORTABLE DISCREPANCY

NO * YES

NOTIFIED CLIENT Howe-36-78
Date 2/28/78
A. J. ...
Project Manager Date

III CAUSE

CORRECTIVE ACTION TAKEN

AUTHORIZED BY _____ Date

- DISTRIBUTION:
- Project Manager
 - Construction Manager
 - Engineering Manager
 - Project Engineer
 - Proj. Supt. / Proj. Const. Mgr.
 - or P & I Procurement Mgr.
 - Chief Field QC Engineer
 - or Procurement Insp. Mgr.
 - QA Supervisor
 - Client

- J. B. Violette
- T. M. Leverette
- G. L. Richardson
- J. Amaral (Gaithersburg)
- J. E. Bashore (Norwalk)

FORMAL REPORT TO CLIENT _____ Date
(If Section II Applies)

CORRECTIVE ACTION IMPLEMENTED

VERIFIED BY _____ Date
Project QA Engineer

*Describe in space provided and attach reference document.

I DESCRIPTION (Cont'd.)

for 26 hangers, representing 49 field welds, were undersize. As a result, the attached MCR #1222 has been issued.

RECOMMENDED ACTION (Cont'd.)

- the identified nonconforming conditions coordinating the action with MCAR 18 and 19.
- 4) Have Quality Control evaluate the methods used to inspect the field fillet weld size and revise the QCIs as necessary to provide clear instructions for inspecting pipe support field fillet welds.
 - 5) Determine and clearly identify what action to be taken to assure quality of field fillet welds on hangers to be installed.
 - 6) Coordinate with Project Engineering and determine reportability under 10 CFR 50, Section 50.55(e). Request Project Engineering to prepare an interim report and issue to the Project Manager within 15 days, 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.



WJW

QA

FEB 23 1978

NONCONFORMANCE REPORT

1. PROJECT NAME <u>Midland</u>		JOB NO. <u>07220</u>		19. NO. <u>1222</u>	20. PAGE <u>1</u> OF <u>3</u>	
2. UNIT(S) <u>152</u>	3. DRAWING/PART NO. <u>SEE CONTINUATION SHEET</u>	REV	4. ITEM DESCRIPTION <u>HANGER FIELD WELDS</u>	5. ITEM LOCATION <u>Box 132-Cent. 2</u>		
6. P.O. OR SPEC NO. <u>M-326</u>	7. SERIAL NO. <u>N/A</u>	8. REPLACEMENT PART P/N <u>N/A</u> REV <u>N/A</u> SER NO. <u>N/A</u>		9. SOURCE <u>Const.</u>	10. CONTRACTOR/SUPPLIER <u>N/A</u>	
11. INSPECTION CRITERIA <input checked="" type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. <u>N/A</u> NO. <u>M-326</u>	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> Rec'g <input checked="" type="checkbox"/> Const <input type="checkbox"/> Test	15. Equip Furnished By <input type="checkbox"/> Client <input checked="" type="checkbox"/> Eng <input type="checkbox"/> FLO
16. NONCONFORMING CONDITION:					24. DISPOSITION CONCURRENCE	
<p>Upon REINSPECTION of completed HANGER field welds per CONSUMER POWER Co. request the attached list of HANGER welds were found to be UNACCEPTABLE due to undersize welds and/or weld defects which do not conform to the designated weld sizes specified on the applicable HANGER sketches. This inspection represents 80 Hangers consisting of 300 Field welds.</p>					<input type="checkbox"/> rework <input type="checkbox"/> reject <input type="checkbox"/> repair <input type="checkbox"/> use as is	
					PROJECT FIELD ENGINEER _____ DATE _____	
					PROJECT ENGINEER _____ DATE _____	
					PROJ CONSTH QC ENGINEER _____ DATE _____	
17. REPORTED BY _____ DATE <u>2/15/78</u>					25. DISPOSITION RESULTS	
18. VALIDATED BY _____ DATE <u>2-15-78</u>						
21. ROUTING: <input type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)						
22. <input type="checkbox"/> Field Engineering Disposition <input type="checkbox"/> Field Engineering Recommended Disposition to Project Engineering						
23. PROJECT ENGINEERING DISPOSITION						
26. QC ACCEPTANCE						
QC ENGINEER _____					DATE _____	
AUTHORIZED INSPECTOR _____					DATE _____	

NONCONFORMANCE REPORT (CONT'D)

HANGER No.	Sketch No.	Fw No.	Weld Size Req'd	Weld Size Measured
16-2HCB-13-115	2-C17-3-13	1	3/16 Two Sides	1/2 Both Sides
6-2DBC-5-114	2-C34-7-4	2	1/4 Two Sides	3/16 ONE LEG TOP SIDE
2 1/2-2CCB-5-H6	2-604-9-25	1	1/4 Two Sides	EXCESSIVE CONCAVITY TWO PLACES
		2	1/4 Two Sides	EXCESSIVE CONCAVITY TWO PLACES
18-1HCB-1-114	1-610-5-22	2	1/4 Four Sides	LEG OF ONE WELD 1/32 UNDERSIZE
		3	1/4 Four Sides	LEG OF TWO WELDS 1/32 UNDERSIZE
		4	1/4 Four Sides	LEG OF THREE WELDS 1/32 UNDERSIZE
10-2CCB-26-114	2-611-1-20	2	5/16 ALL AROUND	1/4 TO 5/16 APPROX. 20% UNDERSIZE
2 1/2-1CCB-28-113	1-610-6-38	2	3/16 THREE SIDES	LEG OF 1 1/2 WELDS 1/16 UNDERSIZE
8-2GCB-16-110	2-613-3-21	1	1/4 Two Sides	BOTH WELDS UNDERSIZE 1/16
		2	1/4 Two Sides	BOTH WELDS UNDERSIZE 1/16
13-2HCB-1-112	2-611-5-20	3	1/4 ALL AROUND	ONE LEG UNDERSIZE 1/32
2 1/2-2FCB-24-111	2-611-6-32	1	1/4 Two Sides	BOTH SIDES UNDERSIZE 1/16
		2	1/4 Two Sides	BOTH SIDES UNDERSIZE 1/16
		3	1/4 Two Sides	BOTH SIDES UNDERSIZE 1/16
		4	1/4 Two Sides	BOTH SIDES UNDERSIZE 1/16
12-2GCB-25-119	2-611-7-2	4	1/4 ONE SIDE	WELD UNDERSIZE 1/32
2 1/2-1HCC-76-114	1-603-17-4	4	3/16 ONE SIDE	1/2 OF WELD IS UNDERSIZE 1/32
24-1HCB-2-115	1-610-2-6	1	1/4 Four Sides	ALL WELDS UNDERSIZE 1/32
		2	1/4 Four Sides	ALL WELDS UNDERSIZE 1/32
		3	1/4 Four Sides	ALL WELDS UNDERSIZE 1/32
		4	1/4 Four Sides	ALL WELDS UNDERSIZE 1/32
12-2HCB-6-115	2-613-3-5	1	1/4 Two Sides	TOP SIDE UNDERSIZE 1/16
		2	1/4 Two Sides	TOP SIDE UNDERSIZE 1/16
11-1CCB-13-111	1-603-5-7	1	5/16 ALL AROUND	WELD SIZE IS OK BUT HAS RECENTLY IMPROVED
		2	5/16 ALL AROUND	WELD UNDERSIZE 1/32 APPROX. 1/4 TO 1/8 LEAK
2 1/2-1CCB-12-111	1-603-7-1	1	1/4 Two Sides	1/2 ONE SIDE
1-200-1-111	2-604-6-11	2	5/16 ONE SIDE	WELD UNDERSIZE 1/16



Hangar No.	Sketch No.	Fw No.	Weld Size Req'd	Weld Size Measured
4-1CCB-13-H5	1-603-5-8	3	3/16" Two Sides	ONE SIDE UNDERSIZE 1/16" APPROX 3/4 LONG
		4	3/16" Two Sides	ONE SIDE UNDERSIZE 1/32" APPROX 1/4 LONG
		5	3/16" Two Sides	ONE SIDE UNDERSIZE 1/32" APPROX 3/4 LONG
		6	3/16" Two Sides	BOTH SIDES UNDERSIZE 1/16"
6-1FCB-16-H7	1-603-6-33	3	3/16" ALL AROUND	WELD UNDERSIZE 1/16" APPROX 3/16" LONG
22-1HCC-65-H4	1-603-12-10	1	3/16" Two Sides	BOTH SIDES UNDERSIZE 1/8" APPROX 1/2" LONG
		8	3/16" ALL AROUND	WELD UNDERSIZE 1/16" ALL AROUND
		7	3/16" ALL AROUND	WELD UNDERSIZE 1/16" ALL AROUND
4-1HCB-18-H1G	1-610-3-41	1	3/16" Four Sides	ONE SIDE UNDERSIZE 1/16" APPROX 1/4" LONG
		2	3/16" Four Sides	ONE SIDE UNDERSIZE 1/16" APPROX 1" LONG
		3	3/16" Four Sides	ONE SIDE UNDERSIZE 1/16" APPROX 1" LONG
		4	3/16" Four Sides	THREE SIDES UNDERSIZE 1/16" APPROX 1/4" LONG
2 1/2-2CCB-3-H10	2-604-15-19	5	3/16" ALL AROUND	WELD UNDERSIZE 1/16" ON EDGE OF BRACE
		6	3/16" ALL AROUND	WELD UNDERSIZE 1/16" ON EDGE OF BRACE
18-1HCB-2-H9	1-610-3-9	2	1/4" Four Sides	WELDS UNDERSIZE 1/16" 2-1/2" APPROX 2-3" APART
		4	1/4" Four Sides	TWO SIDES UNDERSIZE ONE LEG 1/16"
2 1/2-2CCB-12-H5	2-604-7-5	3	3/16" Two Sides	ONE SIDE UNDERSIZE 1/16"
3-2GCB-15-H16	2-613-2-23	1	1/4" Two Sides	ONE SIDE UNDERSIZE 1/32" - 1" LONG OTHER SIDE 1/32" - 2 1/4" LONG
6-1FCB-18-H3	1-603-5-3	3	3/16" ALL AROUND	WELD UNDERSIZE 1/32" TO 1/16" APPROX 1/4" LONG
2 1/2-2GCB-24-H1	2-611-3-38	1	1/4" ALL AROUND	WELD IS 1/16" UNDERSIZE & NOT WELDED ALL AROUND
		2	3/16" ONE SIDE	WELD UNDERSIZE 1/32"
Hold for Engineering Disposition				
ALL HANGARS ARE Q-LISTED				
49 Hold Tags Applied - ONE TO EACH HANGER				

NONCONFORMING 02-15-74

E04/05/78

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50-329/330

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ORG: HOWELL S H
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DOCTYPE: LETTER NOTARIZED: NO
SUBJECT:

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FORWARDING CONSTRUCTION DEFICIENCY REPTS CONSISTING OF BECHTEL ASSOCIATES"
INTERIM REPTS IN RESPONSE TO MANAGEMENT CORRECTIVE ACTION REPTS (MCAR-1 REPT
NO 18 & 19) AND QUALITY ASSURANCE PROGRAM MANAGEMENT CORRECTIVE ACTION REPT
(MCAR-21) WHICH ADDRESSES

PLANT NAME: MIDLAND - UNIT 1
MIDLAND - UNIT 2

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CONSTRUCTION DEFICIENCY REPORT (10CFR50.55(E).
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