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October 15, 1985

Robert Guild, Esq.
BPI
109 North Dearborn St.
Suite 1300
Chicago, Illinois 60602

Re: In the Matter of: Commonwealth Edison Company
(Braidwood Station, Units 1 and 2) Docket
Nos. 50-456 and 50-457 OL

Dear Mr. Guild:

On August 28, 1985, Commonwealth Edison Company filed its Sixth Partial Response to Intervenor's Rorem, et al. ("Intervenors") First Set of Quality Assurance Interrogatories and Request to Produce. The Sixth Partial Response provided responses to Specific Interrogatories 58 and 59, which pose specific questions with respect to the 68 separate items of Intervenor's QA Contention. Enclosed herewith are the affidavits of Messrs. Gieseke and Quaka supporting the revised response to that part of the response to Interrogatories 58 and 59 which corresponds to Contention Item 3.C. The revised response which is attached to those affidavits replaces in its entirety the response to Contention Item 3.C. that was originally submitted in Commonwealth Edison's Sixth Partial Response. The revised response provides an updated and more accurate response than the originally submitted response to Contention Item 3.C. In addition, a document referenced for the first time in the revised response to Contention Item 3.C. and not previously provided is enclosed for your information.

Very truly yours,

Lisa C. Styles

Lisa C. Styles
One of the Attorneys for
Commonwealth Edison Company

LCS:klb

Enclosures

cc: Service List

8510180338 851015
PDR ADOCK 05000456
G PDR

DS03

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION


In the Matter of:)
COMMONWEALTH EDISON COMPANY)
) Docket Nos. 50-456
(Braidwood Station) 50-457
Units 1 and 2))

AFFIDAVIT OF THOMAS E. QUAKA


I, Thomas E. Quaka, being first duly sworn, hereby depose and state as follows:

1. I am employed by Commonwealth Edison Company as Site Quality Assurance Supervisor at Braidwood Station.
2. My business address is Braidwood Nuclear Power Station, Braceville, Illinois 60407.
3. I have participated in the preparation of the response to Specific Interrogatories Nos. 58 and 59 filed by Intervenor Rorem, et. al. These interrogatories pose specific questions with respect to the 68 separate items of Intervenor's QA Contention. In particular, I have responsibility for the third paragraph of the revised Response to Item 3.C. attached hereto.
4. The third paragraph of the revised Response to Item 3.C. is true and correct to the best of my knowledge and belief.

Further affiant sayeth not.


Thomas E. Quaka

Subscribed and sworn to before
me this 1 day of October, 1985


Notary Public

My Commission expires on 2/11/89.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

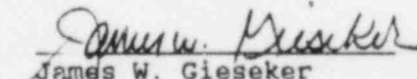
In the Matter of:)
COMMONWEALTH EDISON COMPANY)
) Docket Nos. 50-456
(Braidwood Station) 50-457
Units 1 and 2))

AFFIDAVIT OF JAMES W. GIESEKER


I, James W. Gieseke, being first duly sworn, hereby depose and state as follows:

1. I am employed by Commonwealth Edison Company as a Project Construction Field Engineer at Braidwood Station.
2. My business address is Braidwood Nuclear Power Station, Braceville, Illinois 60407.
3. I have participated in the preparation of the response to Specific Interrogatories Nos. 58 and 59 filed by Intervenor Rorem, et. al. These interrogatories pose specific questions with respect to the 68 separate items of Intervenor's QA Contention. In particular, I have responsibility for the first and second paragraphs of the revised Response to Item 3.C. attached hereto.
4. The first and second paragraphs of the revised Response to Item 3.C. are true and correct to the best of my knowledge and belief.

Further affiant sayeth not.


James W. Gieseke

Subscribed and sworn to before
me this 1 day of October, 1985


Notary Public

My Commission expires on 2/11/89.

CONTENTION ITEM 3.C

3. Contrary to Criterion II, "Quality Assurance Program," of 10 C.F.R. Part 50, Appendix B, Commonwealth Edison Company has failed to establish a quality assurance program which complies with the requirements of Appendix B and which is documented by written policies, procedures, and instructions. Commonwealth Edison Company has failed to assure that its Q.A. Program provides controls over activities affecting quality and that such activities are accomplished under suitably controlled conditions and are not appropriately verified for quality by inspection.
- C. The applicants electrical contractor (Comstock) utilized Level I Quality Control Inspectors for inspection and acceptance of electrical welds. This involved fourteen different Level I Inspectors over four years (Inspection Report 85-06, Exhibit 11).

RESPONSE

An NRC inspection of the Braidwood Construction Assessment Program (BCAP) activities conducted by Mr. R. N. Gardner on February 4 through March 4, 1985 identified the concern referred to in this subcontention with regard to Comstock weld inspections. The results of the NRC inspection were reported in Report Numbers 50-456/85-006 and 50-457/85-006. Although the focus of the inspection activity was on the BCAP Program, the thrust of the above concern was directed against the overall acceptability of Comstock Level I weld inspections performed from 1979 through 1983. Specifically, the NRC inspector concluded that Comstock had utilized Level I Q.C. Inspectors for both inspection and final acceptance of electrical

CONTENTION ITEM 3.C

welds in contravention of the requirements of ANSI N45.2.6-1978 which required, as a minimum, a Level II certification for Quality Control (Q.C.) inspection personnel who determine weld acceptance based on inspections conducted by Level I inspectors. It would appear that the NRC inspector believed that under Comstock Weld Procedure 4.8.3, Comstock Level II inspectors' method of accepting welds was unclear and that Level I inspectors were doing both the inspection and final acceptance of the welds in question. The NRC Inspection Report indicated that this practice involved fourteen different Comstock Level I Q.C. inspectors over a four year time period.

NRC Region III issued a notice of violation with respect to this matter on March 8, 1985. Commonwealth Edison Company does not agree with the proposed violation because the actual use of the Comstock Level I and Level II inspectors for visual weld inspections between 1979 and 1983 was consistent with ANSI N45.2.6-1978. During this time, the activity of Comstock Level I inspectors was limited to the gathering and recording of inspection data and Level II inspectors were making the final decision on weld acceptance based on the evaluation of the inspection checklist generated by the Level I inspectors. Although the Comstock Procedure did not describe clearly the objective criteria used by the Level II inspector to

CONTENTION ITEM 3.C

accept the welds in question, this circumstance did not detract from the fact that both Levels of inspectors were functioning in a manner consistent with ANSI N45.2.6-1978. ANSI N45.2.6-1978 specifically provides that Level I Q.C. inspectors are qualified to perform weld inspections, examinations and tests to predetermined or specific requirements, provided that they document their findings on inspection checklists which include sufficient information to serve as a basis for the final review and acceptance of the weld by Level II inspectors. The review by a Level II inspector of a Level I's weld inspection checklist to determine final acceptability of the weld is a longstanding requirement of the Comstock program as documented in Comstock Weld Procedure 4.8.3.

At the time of NRC's inspection, the Braidwood Site Quality Assurance Department was conducting a follow-up surveillance (No. 4178) with respect to Weld Inspection Procedure 4.8.3. Surveillance No. 4178 was a follow-up to General Office Audit 84-122 which was conducted in September 1984. The audit had determined that Procedure 4.8.3, Rev. F, was inadequate in that the inspection checklist as formulated could not be completed by a Level I inspector without the implication that the Level I inspector was passing judgment on the acceptability of observed conditions.

CONTENTION ITEM 3.C

That is, the lack of documented objective evidence on the Procedure checklist made it unclear as to the method used by the Level II inspector for establishing weld acceptability. It was recommended that either the procedure be revised to define precisely the limited nature of the Level I's involvement or that only Level II Inspectors be used to conduct visual weld inspections. In December 1984, it was decided to use Level II inspectors only to conduct future visual weld inspections. The Surveillance also required that a program be established to re-evaluate past weld inspections performed in the first instance by Comstock Level I inspectors and accepted subsequently by Level II inspectors. Edison is presently initiating a program to verify the acceptability of the welds at issue.

CONTENTION ITEM 3.C

REFERENCES

1. NRC Inspection Report Numbers 50-456/85-06, 50-457/85-06; March 8, 1985 (pages A0003250-3275).
2. Letter (R.F. Warnick to C. Reed) and Notice of Violation, March 8, 1985 transmitting Reference 1 (pages A0003250-3275).
3. Letter (D.L. Farrar to J.G. Keppler), response to Notice of Violation, May 6, 1985 (pages A0003276-3289).
4. Letter (D.L. Shamblin to F. Rolan - BR/PCD 85-309) Level I Inspections, April 2, 1985 (pages A0014004-14005).
5. ANSI N45.2.6-1978 (pages A0013781-A0013788).
6. L.K. Comstock Work Procedures 4.8.3 and 4.13.1 (pages 00002582-2630).
7. NRC Inspection Report Nos. 50-456/84-07; 50-457/84-07; July 20, 1984 (pages A0002059-2073).
8. NRC Inspection Report Nos. 50-456/80-12; 50-457/80-11; October 23, 1980 (pages A0000692-698).
9. NRC Inspection Report Nos. 50-456/83-18; 50-457/83-17 (pages A0001732-1749).
10. NRC Inspection Report Nos. 50-456/84-19; 50-457/84-18 (pages A0002341-2363).
11. CECQA Audit Report No. QA 84-122 (pages B0005400-B0005416).
12. L.K. Comstock Work Procedures 4.13.1 (pages 00002653-00002667).
13. Licensing file on Item 85-006-02, Cont. 3.C (pages A0006572-6615).
14. CECQA Surveillance No. 4178

CONTENTION ITEM 3.C

NAMES AND ADDRESSES

R.N. Gardner	NRC Region III
W. Forney	NRC Region III
R.F. Warnick	NRC Region III
M.J. Wallace	Commonwealth Edison Company
D.L. Shamblin	Commonwealth Edison Company
G. Marcus	Commonwealth Edison Company
J. Gieseke	Commonwealth Edison Company
E. Fitzpatrick	Commonwealth Edison Company
T. Quaka	Commonwealth Edison Company
R. Seltmann	L.K. Comstock and Company, Inc.
F. Rolan	L.K. Comstock and Company, Inc.

SURVEILLANCE DATE: February 12, 1984

FILE NO. 53.4

BRAIDWOOD Q.A. SURVEILLANCE REPORT NO. 4178
FOLLOW UP AUDIT REPORT NO. QAA G-84-122

Contractor/
Organization: L. K. Comstock

Cat. #: 5

Open Item #1: (Questions #22, 28)

Five (5) concerns arose as a result of the review of the Welding Procedure for Structural Attachments (7018) 4.3.3 revision D and the Weld Inspection Procedure 4.8.3 revision F. These concerns are addressed below.

Reported by: Christopher Hayes Date 3-7-85

Lead Auditor: Edward Dietzel Date 4/5/85

Approved by: Tom Quake Date 4/8/85

FU Action Verified By: Christopher Hayes Date 7-10-85

FU Action Reviewed By: Edward Dietzel Date 7-10-85

RDV FU Action Approved By: Tom Quake Date 7/15/85

CAH/tlw (1598S)

cc: Manager of Q.A.
Assistant Manager of Q.A.
Director of Q.A. - (Engr./Constr.)
Manager of Projects
Project Manager
Licensing and Compliance Superintendent
Project Engineering Manager
Site Construction Superintendent
B. H. Kulik
Q. A. File 53.0

58 B0006696
59

Discussion

1. (Question #22) S & L drawings 20E-0-3393P revision P, Section EE and 20E-0-3243N revision B detail DV-263 specified the use of single bevel partial penetration joint, but Comstock welding procedure 4.3.3, revision D failed to address the AWS D1.1 prequalified joint. Detail DV-263 was unique for one particular installation, and had not yet been employed. When asked to assign a W.P.S. to the joint specified in Section EE, a Comstock Engineer, who utilized the cross reference table attached to procedure 4.3.3, specified attachment K. Attachment K was a single bevel full penetration weld and was incorrect. The Engineer said that given a choice he would have assigned the alternate fillet weld configuration for that connection.

Resolution

Comstock will incorporate a partial penetration single bevel joint attachment into procedure 4.3.3 to preclude the inadvertent assignment of attachment K in the event the joint configuration must be utilized.

2. (Question #22) Multipass fillet welds were observed in the field and Weld Procedure 4.3.3, employed the prequalified status of fillet welds afforded by AWS D1.1. AWS D1.1-75 specified the minimum size single pass fillet welds for various thickness ranges of base metal. Comstock's current multipass fillet weld practice created a condition in which the minimum weld size of the initial pass was no longer verifiable.

Resolution

Comstock committed to qualify by test the minimum size multiple pass and maximum size single pass fillet weld utilized in construction for incorporation into Welding Procedure 4.3.3.

3. (Question #28) AWS D1.1 established essentially identical acceptance criteria for porosity in both groove and fillet welds. Comstock's Weld Inspection Procedure 4.8.3 revision F, while specifically addressing porosity in fillet welds, failed to address that same criteria for groove welds. Comstock's Q.C. Inspection Supervisor was unaware of this procedural oversight. He asserted that the porosity criteria addressed in procedure 4.8.3 had been applied to every weld inspected, since porosity is specifically addressed on the Weld Inspection Checklist.

Resolution

Comstock will address the porosity criteria for groove welds in procedure 4.8.3.

4. (Question #28) Comstock's Weld Inspection Procedure 4.8.3 revision F specified that a lap weld equal in size to the thickness of the base material was acceptable, but the criterion in AWS D1.1-75 diverged from the above for material thicknesses exceeding 1/4". A maximum weld size of 1/16" below the material thickness was permitted along edges for those materials.

Resolution

Comstock will expand the scope of their criterion in procedure 4.8.3 to address those material thicknesses of 1/4" and greater.

5. (Question #28) Although Comstock did not currently employ Level I Inspectors, the Welding Inspection Procedure 4.8.3 revision E addressed their utilization in the completion of weld and other related inspections. Level I Inspectors would be required to pass judgement on the acceptability of observed conditions to utilize the checklists supplied by this procedure.

Commonwealth Edison Co's. Q.A. Department will only allow a Level I Inspector to operate in the capacity of a data gatherer. That data in turn, must be analyzed for acceptance by an inspector of a higher level.

Recommendations

Either the references to the employment of Level I inspectors should be deleted from the Comstock's procedures outlining their inspection program or those inspection procedures should be revised to precisely define the limited nature of the Level I capabilities.

Q.A. Follow-Up 12-12-84

Concern #1 - L. K. Comstock has revised procedure 4.3.3 to include in revision F the single-bevel partial penetration groove joint configuration designated as B-P4 in AWS D1.1-1975. Procedure 4.3.3 has received interim approval from QA on 12-7-84. This concern will be resolved when final approval is received.

Concern #2 - L. K. Comstock has requisitioned material for procedure qualification. This item will be closed when required inspection of procedure tests is complete and acceptable.

(1598S)

B0006698

- Concern #3 - L. K. Comstock has revised procedure 4.8.3 for welding inspection in revision G to encompass all types of weld configurations for inspection criteria covering porosity. Form 19 the Weld Inspection Checklist has always contained a check for porosity and was not changed in the revision.
- Concern #4 - L. K. Comstock's specification has been ammended by ECN 23120 para. 401.19.2.d.4 which allows fillet welds equal to the thickness of the base metal. Procedure 4.8.3 has been revised (rev. G) to reflect the exact words of the above ECN.
- Concern #5 - L. K. Comstock has revised procedure 4.8.3 in revision G to eliminate all references to a Level I Q.C. inspector.

Q.A. Follow-Up 2-1-85

- Concern #1 - Procedure 4.3.3 revision F received final approval on 1-7-85. This concern is considered closed.
- Concern #2 - Procedure qualification samples have been welded and are presently at PTL for testing.
- Concern #3 - Procedure 4.8.3 revision G received final approval on 1-11-85. This concern is considered closed.
- Concern #4 - Procedure 4.8.3 revision G received final approval on 1-11-85. This concern is considered closed.
- Concern #5 - Procedure 4.8.3 revision G received final approval on 1-11-85.

QA to follow-up on Concern #2 and #5 only.

QA Follow-Up 2-12-85

Concern #2 - Samples have been inspected by PTL and found acceptable. Tests have been numbered LKCE-PQR-076 through 079 (attached). This concern is considered closed.

Concern #5 - This concern remains open pending the establishment of a program for evaluating the acceptability of previous work performed by Level I inspectors.

This open item is considered open pending resolution of Concern #5.

QA Follow-Up 7-09-85

On July 8, 1985, NCR #688, Supplement 1 (Revision 1) "Quality Control Inspector Reinspection Program" (QCIRP) received final concurrence. This NCR Supplement governs the QCIRP which initiated the development of Procedure PM-11, "Quality Control Inspector Reinspection", to control this activity. In addition, PM-11 is referenced in NCR #688 Supplement 1 (Revision 1).

The QCIRP, which is to be implemented in accordance with PM-11, encompasses "all inspectors" (Level I, II, & III) certified by contractors included in the QCIRP, (See PM-11, Rev. 0, Paragraph 3.11).

These documents establish a methodology which will include the proof of contractor programs in regards to the utilization of Level I inspectors. Based on the results of the QCIRP, a determination can be made as to the acceptability of previous work performed by Level I inspectors, i.e. if the programs for the utilization of Level I inspectors are evaluated to be satisfactory, then the work performed can be concluded to be satisfactory. Thus, the QCIRP program will result in an evaluation of the acceptability of previous work performed by Level I inspectors. As such, item #5 may now be considered resolved. Site Q.A. believes this item is ready for closure.

LRCE-PQR-076

WELDING PROCEDURE QUALIFICATION TEST RECORD PROCEDURE SPECIFICATION

Material specification A588
 Welding process SMAW
 Manual or machine Manual
 Position of welding 1F-Flat
 Filler metal specification A5.1
 Filler metal classification E7018
 Weld metal grade N/A
 Shielding gas N/A Flow N/A
 Single or multiple pass Single/Multiple
 Single or multiple arc Single
 Welding current DCRP
 Welding progression N/A
 Preheat temperature **
 Postheat treatment N/A
 Welder's name M. Dinelli #62

GROOVE WELD TEST RESULTS

Reduced-section tension test

Tensile strength, psi:

1 N/A2 N/A

Guided-bend test

Root

1 N/A2 N/A

Face

1 N/A2 N/ARadiographic-Ultrasonic Examination N/A

Fillet test results

Min Size Multiple Pass

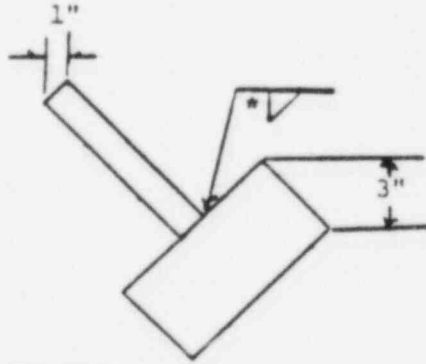
Max Size Single Pass

Macroetch

Macroetch

1 Acc3 Acc1 Acc3 Acc2 Acc2 AccLaboratory Test No. MWQ-711BS-9489

WELDING PROCEDURE

Pass no.	Elect. size	Welding Current		Speed of travel	Joint Detail	
		Amps	Volts			
SINGLE PASS						
1	1/8"	130	24	N/A		
MULTIPLE PASS						
1	3/32"	95 - 100	26 - 30	N/A		
2	3/32"	90 - 100	24 - 26	N/A		
3	3/32"	90 - 100	24 - 26	N/A		

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of 5B of AWS D1.1, Structural Welding Code.

**Base Metal Temp. 56°F
 A1999 Due Date: 6-17-85

Manufacturer or Contractor L.K. Comstock & Co.Authorized by [Signature]Date 2-9-85

PREPARED	APPROVED	REVISED	TITLE	ORIG. DATE	REVISION
			PROCEDURE		

PTL - CHICAGO

Pittsburgh Testing Laboratory


**Pittsburgh
Testing
Laboratory**

 Form No.: MWQ-1
Rev. 2
6-6-84
Report No: MWQ-711Lab No.: BST-9489Report Date: 2-4-85Job No: CH-3175
 REPORT
of

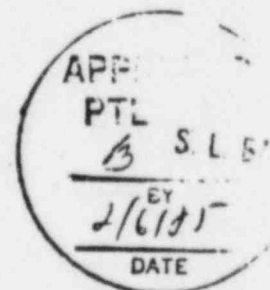
Miscellaneous Welding Qualification

Client: Commonwealth Edison CompanyProject: Braidwood Nuclear Power StationContractor: L. K. Comstock

Contractor Supplied Information:

Type of Qualification Welding ProcedurePosition Qualified IF - FLATWelder's Name M. DINELLIWelder I.D. # 62Welding Process SMAWManual or Machine MANUALMaterial Specification A-588Standard AWS D11-1975Date of Qualification: 2-4-85Visual Inspection: ☐ ACC ☐ REJ ☒ N/ABend/Fracture: ☐ ACC ☐ REJ ☒ N/AMacroetch Test: ☒ ACC ☐ REJ ☐ N/A

Test Results:

☒ Conforming☐ Non-Conforming☐ Not ApplicableRemarks: Visual inspection of weld area only.Inspector/Level: Carl Thomas III C. W. THOMASSupervisor/Date: B. L. Meredith / II 2-4-85

B. L. MEREDITH

REVIEWED BY B. L. MeredithDATE 2/6/85

B0006702

LKCE-PQR-077

WELDING PROCEDURE QUALIFICATION TEST RECORD

PROCEDURE SPECIFICATION

Material specification A588
 Welding process SMAW
 Manual or machine Manual
 Position of welding 2F-Horizontal
 Filler metal specification A5.1
 Filler metal classification E7018
 Weld metal grade N/A
 Shielding gas N/A Flow N/A
 Single or multiple pass Single/Multiple
 Single or multiple arc Single
 Welding current DCRP
 Welding progression N/A
 Preheat temperature **
 Postheat treatment N/A
 Welder's name M. Dinelli #62

GROOVE WELD TEST RESULTS

Reduced-section tension test

Tensile strength, psi:

1 N/A2 N/A

Guided-bend test

Root

Face

1 N/A1 N/A2 N/A2 N/ARadiographic-Ultrasonic Examination N/A

Fillet test results

Min Size Multiple Pass

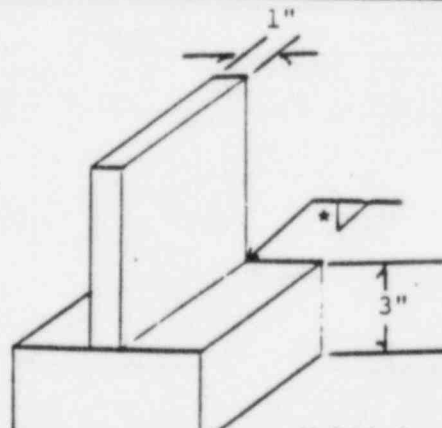
Max Size Single Pass

Macroetch

Macroetch

1 ACC3 ACC1 ACC3 ACC2 ACC2 ACCLaboratory Test No. 1122-71235T-24757470 HP

WELDING PROCEDURE

Pass no.	Elect. size	Welding Current		Speed of travel	Joint Detail	
		Amps	Volts			
SINGLE PASS						
1	1/8"	120 - 130	20 - 22	N/A		
MULTIPLE PASS						
1	3/32"	90 - 100	22 - 24	N/A		
2	3/32"	90 - 100	22 - 24	N/A		
3	3/32"	90 - 100	22 - 24	N/A		

Multiple -

*Single - 1/8" Fillet 3/16" Fillet

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of SB of AWS D1.1, Structural Welding Code.

**Base Metal Temp. 56°F
 A1999 Due Date: 6-17-85

Manufacturer or Contractor L.K. Comstock & Co.Authorized by [Signature]Date 2-9-85

PREPARED	APPROVED	REVISED	TITLE	ORIG. DATE	REVISION
			PROCEDURE		

PTL - CHICAGO

1000 N. LAKE ST.
CHICAGO, ILL. 60606



**Pittsburgh
Testing
Laboratory**

Form No.: MWQ-1
Rev. 2
6-6-84

Report No: MWQ-712

Lab No. : BST-9490

Report Date: 2-4-85

Job No : CH-3175

**REPORT
of**

Miscellaneous Welding Qualification

Client : Commonwealth Edison Company

Project : Braidwood Nuclear Power Station

Contractor: L. K. Comstock

Contractor Supplied Information:

Type of Qualification Welding Procedure

Position Qualified 2F-HORIZONTAL

Welder's Name M. DINELLI

Welder I.D. #62

Welding Process SMAW

Manual or Machine MANUAL

Material Specification A-588

Standard AWS D11-1975

Date of Qualification: 2-4-85

Visual Inspection: ☐ ACC ☐ REJ ☒ N/A

Bend/Fracture : ☐ ACC ☐ REJ ☒ N/A

Macroetch Test : ☒ ACC ☐ REJ ☐ N/A



Test Results:

☒ Conforming ☐ Non-Conforming ☐ Not Applicable

Remarks: Visual inspection of weld area only.

Inspector/Level: C. W. Thomas / II C. W. THOMAS

Supervisor/Date: B. L. Meredith / II 2-4-85
B. L. MEREDITH

REVIEWED BY 17K16
DATE 2/12/85

B0006704

LKCE-PQR-078

WELDING PROCEDURE QUALIFICATION TEST RECORD

PROCEDURE SPECIFICATION

Material specification A588
 Welding process SMAW
 Manual or machine Manual
 Position of welding 3F-Vertical
 Filler metal specification A5.1
 Filler metal classification E7018
 Weld metal grade N/A
 Shielding gas N/A Flow N/A
 Single or multiple pass Single / Multiple
 Single or multiple arc Single
 Welding current DCRP
 Welding progression Upward
 Preheat temperature **
 Postheat treatment N/A
 Welder's name B. Rawlins #97

GROOVE WELD TEST RESULTS

Reduced-section tension test:

Tensile strength, psi:

1 N/A2 N/A

Guided-bend test

Root

Face

1 N/A1 N/A2 N/A2 N/ARadiographic-Ultrasonic Examination N/A

Fillet test results

Min Size Multiple Pass

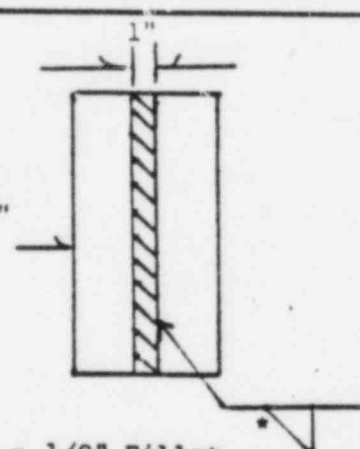
Max Size Single Pass

Macroetch

Macroetch

1 Acc 3 Acc1 Acc 3 Acc2 Acc2 AccLaboratory Test No. 1107-712EST-7491

WELDING PROCEDURE

Pass no.	Elect. size	Welding Current		Speed of travel	Joint Detail
		Amps	Volts		
SINGLE PASS					 <p>*Single - 1/8" Fillet Multiple - 3/16" Fillet</p>
1	1/8"	130 - 140	20 - 22	N/A	
MULTIPLE PASS					
1	3/32"	90	22	N/A	
2	3/32"	90	22	N/A	
3	3/32"	90	22	N/A	

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of 5B of AWS D1.1, Structural Welding Code.

**Base Metal Temp. 57°F
 A1999 Due Date: 6-17-85

Manufacturer or Contractor L.K. Comstock & Co.Authorized by [Signature]Date 2-9-85

PREPARED	APPROVED	REVISED	TITLE	ORIG. DATE	REVISION
			PROCEDURE		



Pittsburgh Testing Laboratory

Form No.: MQ-1
Rev. 2
6-6-84

Report No: MW/Q-713

Lab No. : BST-9491

Report Date: 2-4-85

Job No : CH-3175

REPORT of

Miscellaneous Welding Qualification

Client : Commonwealth Edison Company

Project : Braidwood Nuclear Power Station

Contractor: L. K. Comstock

Contractor Supplied Information:

Type of Qualification Welding Procedure

Position Qualified 3F-VERTICAL

Welder's Name B. RAWLINS

Welder I.D. #97

Welding Process SMAW

Manual or Machine MANUAL

Material Specification A-588

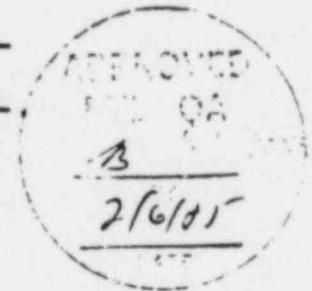
Standard AWS D1.1-1975

Date of Qualification: 2-4-85

Visual Inspection: ☐ ACC ☐ REJ ☒ N/A

Bend/Fracture : ☐ ACC ☐ REJ ☒ N/A

Macroetch Test : ☒ ACC ☐ REJ ☐ N/A



Test Results:

☒ Conforming ☐ Non-Conforming ☐ Not Applicable

Remarks: Visual inspection of weld area only.

Inspector/Level: C. W. THOMAS / II C. W. THOMAS

Supervisor/Date: B. L. MEREDITH / II 2-4-85
B. L. MEREDITH

REVIEWED BY mm/6
DATE 2/11/85

B0006706

LKCE-PQR-079

WELDING PROCEDURE QUALIFICATION TEST RECORD

PROCEDURE SPECIFICATION

Material specification A588
 Welding process SMAW
 Manual or machine Manual
 Position of welding 4F-Overhead
 Filler metal specification A5.1
 Filler metal classification E7018
 Weld metal grade N/A
 Shielding gas N/A Flow N/A
 Single or multiple pass Single / Multiple
 Single or multiple arc Single
 Welding current DCRP
 Welding progression N/A
 Preheat temperature **
 Postheat treatment N/A
 Welder's name B. Rawlins #97

GROOVE WELD TEST RESULTS

Reduced-section tension test

Tensile strength, psi:

1 N/A
 2 N/A

Guided-bend test

Root

Face

1 N/A 1 N/A
 2 N/A 2 N/A

Radiographic-Ultrasonic Examination N/A

Fillet test results

Min Size Multiple Pass

Max Size Single Pass

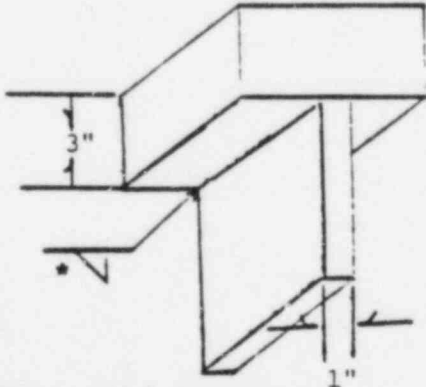
Macroetch

Macroetch

1 Acc 2 Acc 1 Acc 2 Acc
 2 Acc 2 Acc

Laboratory Test No. 11003-714
BST-9472

WELDING PROCEDURE

Pass no.	Elect. size	Welding Current		Speed of travel	Joint Detail	
		Amps	Volts			
SINGLE PASS						
1	1/8"	120 - 130	20 - 22	N/A		
MULTIPLE PASS						
1	3/32"	90 - 100	20 - 22	N/A		
2	3/32"	90 - 100	20 - 22	N/A		
3	3/32"	90 - 100	20 - 22	N/A		

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of 5B of AWS D1.1, Structural Welding Code.

**Base Metal Temp. 56°F
 A1999 Due Date: 6-17-85

Manufacturer or Contractor L.K. Comstock & Co.Authorized by [Signature]Date 2-9-85

PREPARED	APPROVED	REVISED	TITLE	ORIG. DATE	REVISION
			PROCEDURE		

B000670.7



**Pittsburgh
Testing
Laboratory**

Form No.: MWQ-1
Rev. 2
6-6-84

Report No: MWQ-714

Lab No. : BST-9492

Report Date: 2-4-85

Job No : CH-3175

REPORT

of

Miscellaneous Welding Qualification

Client : Commonwealth Edison Company

Project : Braidwood Nuclear Power Station

Contractor: L. K. Comstock

Contractor Supplied Information:

Type of Qualification Welding Procedure

Position Qualified 4F - OVERHEAD

Welder's Name B. RAWLINS

Welder I.D. #97

Welding Process SMAW

Manual or Machine MANUAL

Material Specification A-588

Standard AWS D1.1-1975

Date of Qualification: 2-4-85

Visual Inspection: ☐ ACC ☐ REJ ☒ N/A

Bend/Fracture : ☐ ACC ☐ REJ ☒ N/A

Macroetch Test : ☒ ACC ☐ REJ ☐ N/A

Test Results:

☒ Conforming ☐ Non-Conforming ☐ Not Applicable

Remarks: Visual inspection of weld area only.



Inspector/Level: C. W. Thomas III C. W. THOMAS

Supervisor/Date: B. L. Meredith/II 2-4-85

B. L. MEREDITH

REVIEWED BY h.h.

DATE 2/16/85

58 B0006708
59

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
COMMONWEALTH EDISON COMPANY)	Docket Nos. 50-456
)	50-457
(Braidwood Station Units 1 and 2))	

CERTIFICATE OF SERVICE

I hereby certify that a copy of the attached letter was served by deposit in the United States mail, first-class postage prepaid, on the persons identified below, this 15th day of October, 1985.

Herbert Grossman, Esquire
Chairman
Administrative Law Judge
Atomic Safety and Licensing
Board
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Lawrence Brenner, Esquire
Administrative Law Judge
Atomic Safety and Licensing
Board
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Dr. Richard F. Cole
Administrative Law Judge
Atomic Safety and Licensing
Board
U.S. Nuclear Regulatory
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Washington, D.C. 20555

Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Dr. A. Dixon Callihan
Administrative Law Judge
102 Oak Lane
Oak Ridge, TN 37830

Atomic Safety and Licensing
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U.S. Nuclear Regulatory
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Washington, D.C. 20555

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U.S. Nuclear Regulatory
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Washington, D.C. 20555

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Douglass W. Cassel, Jr., Esquire
Timothy W. Wright, III, Esquire
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Charles Jones, Director
Illinois Emergency Services
and Disaster Agency
110 East Adams
Springfield, IL 62705

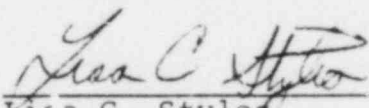
William Little
Director Braidwood Project
Region III
U.S. Nuclear Regulatory
Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

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Chief, Docketing and Services
U.S. Nuclear Regulatory
Commission
Office of the Secretary
Washington, D.C. 20555

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Bethesda, Maryland 20014



Lisa C. Styles