

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-373/82-48(DETP); 50-374/82-14(DETP)

Docket Nos. 50-373; 50-374

Licenses No. NPF-11; CPPR-100

Licensee: Commonwealth Edison Company
Post Office Box 767
Chicago, IL 60690

Facility Name: LaSalle County Station, Units 1 and 2

Inspection At: LaSalle Site, Marseilles, IL

Inspection Conducted: September 22-23, 1982

Inspector: *W. J. Key*
W. J. Key

10/12/82

Approved By: *D. H. Danielson*
D. H. Danielson, Chief
Materials and Processes Section

10/12/82

Inspection Summary

Inspection on September 22-23, 1982 (Reports No. 50-373/82-48(DETP); 50-374/82-14(DETP))

Areas Inspected: Review of sacrificial shield specification and drawings, welding procedures, welder and inspector qualifications, QA surveillance reports, radiographs and ultrasonic reports of welds; visually examined welds of the sacrificial shield. The inspection involved a total of 16 inspector-hours onsite by one NRC inspector.

Results: No items of noncompliance or deviations were identified.

DETAILS

Persons Contacted

Commonwealth Edison Company (CECo)

D. Shamblin, Project Superintendent
R. Rose, Assistant Project Superintendent
T. DeAntino, QA Engineer

Walsch Construction Company (Walsch)

M. Dougherty, QA Manager

Functional or Program Areas Inspected

1. Special Inspection - Purpose

The purpose of this inspection was to investigate a complaint made by a worker at another nuclear power plant construction site, that welds of the LaSalle Station Reactor Sacrificial Shield did not meet installation specification and code requirements.

During this inspection the inspector reviewed the S&L specification for erection of the sacrificial shield, reviewed drawings, welding procedures, welder and inspector qualifications, licensee surveillance reports of erectors activities, reviewed radiographs of shield welds, and visually examined shield and attachment welds.

2. Sacrificial Shield - Specification

The applicable specification is Sargent and Lundy (S&L) Specification No. 2533, Section 5-2, Structural Steel and Concrete Structures Work. LaSalle County Station, Units 1 and 2 and drawings are the controlling documents for fabrication and erection. Inryco shop fabricated the shield in 1/4 sections for field installation in accordance with S&L instructions on the drawings.

The specification requires that welding be performed in accordance with the AWS Welding Code, 1972 Edition, and that radiographic examination be performed in accordance with the requirements of ASME Code Section III, NA Appendix X, 1974 Summer Addenda, and Conam approved Procedure RT-1-NP, Revision 3, and that radiographic acceptance be in accordance with AWS D1.1, 1972 Edition. All butt welds of the shield were 100% radiographically or ultrasonically examined.

3. Welding Procedure and Welder Qualification

The inspector reviewed the following Walsch Welding procedures used to weld both Units 1 and 2 sacrificial shields.

- a. CS-1, Revision 20, 5/10/76, SMAW
- b. CS-2, Revision 4, 3/20/76, SMAW
- c. CS-3, Revision 5, 5/19/76, GMAW
- d. CS-4, Revision 1, 3/30/77, SAW

The following welders were selected from documentation indicating that they had welded on either or both of the shields. In addition, their certification records were examined.

<u>Name</u>	<u>Symbol</u>	<u>Process</u>
R. Henning	3	GMAW-SMAW-SAW
D. Aussem	07	SMAW
D. Murry	L5	SMAW
G. Cattani	T7	SMAW
D. Dunn	V5	SMAW
R. Anderson	06	SMAW
B. Yuhas	F1	SMAW
J. Henning	C1	SMAW
J. Stonet	R5	SMAW
R. Ogden	E4	SMAW

No items of noncompliance or deviations were identified.

4. Inspector Qualifications

The inspector selected the following QC inspectors from documentation, and reviewed their certification records.

T. E. Holt
M. Fiorentini

No items of noncompliance or deviations were identified.

5. Ultrasonic Examination

The inspector reviewed the following Conam ultrasonic reports of sacrificial shield welds.

- . Report No. 65, Weld F, 3/15/77
Vertical Stiffner at 225°
- . Report No. 62, 3/16/77
Vertical Stiffners at 105° Welds A, E
Vertical stiffners at 110° Welds A, E, H
- . Report No. 61, 3/16/77
Vertical stiffner at 315° Weld E Center line
- . Report No. 58, 3/18/77
Horizontal stiffner at 280°
Welds A, B, C, H, Z

- . Report No. 67, 3/18/77
Vertical stiffners at 285° and 315°
Welds E, F
- . Report No. 50, 3/1/77
Horizontal stiffner at 320°
Welds C, B, I
- . Report No. 129, 10/21/77
Internal stiffner at 340°
Welds F, G, H
- . Report No. 109, 8/15/77
Horizontal stiffner at 140°
Welds E, H, I, D, F
- . Report No. 99, 8/3/77
Horizontal stiffner at 255°
Welds B, C
- . Report No. 154, 12/30/77
Horizontal stiffner at 270° Elevation 784'
Welds D, E, F
- . Report No. 166, 1/17/78
Vertical stiffner at 270° Elevation 784'
Welds A, B, C, D, E, G, H, I, J
- . Report No. 167, 1/31/78
Vertical stiffner at 57° Elevation 791'
Welds B, C
- . Report No. 176, 2/27/78
Horizontal stiffner at 197° Elevation 791'
Weld J
- . Report No. 206, 4/5/78
Vertical stiffner at 357° Elevation 794'
Welds B, C
- . Report No. 231, 5/4/78
Vertical stiffner at 75° Elevation 804'
Top Flange
- . Report No. 235, 5/5/78
Type M stiffner at 150°
Welds A, B, C, I, J
- . Report No. 240, 5/18/78
Type M stiffner at 330°
Welds A, B, C, G, H

No items of noncompliance or deviations were identified.

6. Radiographic Examination

Unit 1

The following radiographs of the sacrificial shield were selected from the Walsch QC vault and reviewed for acceptance to the requirements of the AWS Welding Code.

- . Report No. 321, 4/5/77
Drawing S-355, Position 44 through 49
Plate to plate horizontal seam weld, Elevation 783'
- . Report No. 330, 4/12/77
Drawing S-355, Position 30 through 35
Plate to plate horizontal seam weld, Elevation 783'
- . Report No. 384, 7/12/77
Drawing S-355, Position 90 through 6
Plate to plate horizontal seam weld, Elevation 783'
- . Report No. 375, 7/26/77
Drawing S-355
Plate to plate horizontal seam weld, Elevation 794'
- . Report No. 83, 10/30/76
Drawing 10544
Plate to plate vertical seam, at 139° 28"
- . Report No. 116, 11/14/76
Drawing 10544
Plate to plate vertical seam, at 229° 53"
- . Report No. 21, 9/20/76
Drawing 10544
Plate to plate vertical seam, at 229° 53"
- . Report No. 43, 9/30/76
Drawing 10544
Vertical seam, at 320° 00"
- . Report No. 103, 11/5/76
Drawing 10544
Vertical seam, at 322° 25"
- . Report No. 65, 10/11/76
Drawing 10544
Vertical seam, at 230° 00"

Unit 2

The following radiographs of Unit 2 sacrificial shield welds were selected and reviewed by the inspector.

- . Report No. 486, 11/10/77
Drawing S-855, Positions 63 through 72
Plate to plate horizontal seam, at Elevation 783'
- . Report No. 414, 9/26/77
Drawing S-855, Position 9 through 16
Plate to plate horizontal seam, at Elevation 783'
- . Report No. 429, 10/4/77
Drawing S-855
Plate to plate horizontal seam, at Elevation 783'
- . Report No. 475, 11/2/77
Drawing S-855
Plate to plate horizontal seam, at Elevation 783'
- . Report No. 303, 3/23/77
Drawing S-855
Plate to plate horizontal seam, at Elevation 775'
- . Report No. 312, 3/30/75
Drawing S-855
Plate to plate horizontal seam, at Elevation 775'
- . Report No. 251, 2/17/77
Vertical seam at 3° 0" at Elevation 775'
- . Report No. 270, 2/24/77
Horizontal seam, at Elevation 775'
- . Report No. 317, 4/4/77
Plate to plate horizontal seam, at Elevation 775'
- . Report No. 549, 6/5/78
Plate to plate horizontal seam, at Elevation 775'
- . Report No. 302, 3/23/76
Plate to plate horizontal seam, at Elevation 775'

The inspector reviewed a total of 92 radiographs on Unit 1 sacrificial shield welds and 73 radiographs of Unit 2 for a total of 165 radiographs. Repairs had been made to some of the welds to remove unacceptable indications, however the final welds met AWS Code acceptance requirements.

No items of noncompliance or deviations were identified.

7. Visual Examination

The inspector visually examined horizontal and vertical seam welds on Unit 2 at Elevations 775' and 783' and the following attachment welds.

- . Restraint No. 2R90G
- . Restraint No. RH40-2811X
- . Restraint No. 2R43
- . Restraint No. 2R109F

All welds of the sacrificial shield have been ground flush or with a slight reinforcement, and where required, the shield has been painted. Due to the operation of Unit 1 the inspector was unable to visually examine these welds.

No items of noncompliance or deviations were identified.

8. CECo Surveillance

The inspector reviewed the following QA surveillance reports of Walsch Construction Company activities during sacrificial shield erection.

- . Report No. 78-596, 11/21/78
File No. J-2533.26
Two items of concern noted
Follow-up verified on 3/5/79
Approved on 3/13/79
- . Report No. 78-423, 8/29/78 - 9/1/78
File No. J-2533.26
Results-Clear
- . Report No. 78-252, 7/20-22/78
Results-Clear
- . Report No. 78-160, 4/7/78 - 6/1/78
Results-Clear
- . Report No. 78-155, 3/30/78
Results-Clear
- . Report No. 78-135, 3/28-30/78
One item of concern
Followup verified and approved
- . Report No. 78-113, 3/16/78
Results-Clear
- . Report No. 114, 7/12/77
Results-Clear
- . Report No. 88, 5/4/77
Results-Clear
- . Report No. 71, 4/28/77
Results-Clear
- . Report No. 40, 3/22/77
Results-Clear
- . Report No. 12, 2/24/77
Results-Clear
- . Report, Week of 11/15/76
Results-Clear

Report, Week of 10/11/76
Results-Clear

9. Conclusions

Based on the reviews of specifications, drawings, QA surveillance reports, personnel certifications, radiographs, ultrasonic reports, and visual examinations of completed welds, it is the judgement of the inspector that welds of the sacrificial shield and attachments thereto are in accordance with the specification and referenced codes.

10. Exit Meeting

On September 23, 1982, the inspector met with Mr. R. Rose and summarized the scope and findings of the inspection.