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NORTH ST. LOUIS AVENUE  
SKOKIE, ILLINOIS 60076  
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674-8500 683-2525



THE ROBERT IRSAY COMPANY

A ZEPHYRUS COMPANY

May 5, 1989

Mr. E. William Brach  
Chief, Vendor Inspection Branch  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555

RE: Docket No. 99900742/89-01  
Response to Inspection Report

Dear Mr. Brach,

As directed by your letter of April 7, 1989, we are pleased to submit our report of corrective actions and actions to prevent recurrence of the two nonconformances identified in the subject report. We trust that these responses will be found satisfactory and that actions described will correct these nonconformances. We have included objective evidence of corrective actions taken in order to facilitate close-out of the nonconformances.

We appreciate the opportunity of reviewing our quality program with your office and especially the many helpful suggestions and recommendations which your inspectors offered.

If any further response is required, please advise.

Very truly yours,

THE ROBERT IRSAY COMPANY

Charles R. James  
Executive Vice President

RFK/pc

Enc.

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PDR GA999 EMVROBER  
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THE ROBERT IRSAY COMPANY

RESPONSE TO NONCONFORMANCE 89-01-02

Description of Nonconformance:

Contrary to Criterion XVI of Appendix B to 10 CFR 50, measures are not established in Section 17 of the RICO QAM to take necessary corrective action to correct adverse findings identified by external organizations, such as customers, and prevent their recurrence.

RICO Comment:

The Robert Irsay Company has always taken the findings and observations of its clients and their agents seriously and attempted to provide meaningful corrective actions and program adjustments as necessary to fulfill its obligations to the law and its clients. In the specific instance cited the observation is correct and we can offer nothing more than our pledge to do a better job of correcting nonconformances and preventing their recurrence.

Corrective Action:

In response to the condition and observations noted, RICO has revised Section 17, Corrective Action of its Q. A. Manual to address the subject of responses to external audits and actions to prevent recurrence of findings resulting therefrom. A copy of the revised section is enclosed.

Action to Prevent Recurrence:

Implementation of the procedures in the revised Section 17 will prevent repetition of audit findings.

A Corrective Action Request dealing with the Nonconformances resulting from the N.R.C. inspection is enclosed.

## 17.0 CORRECTIVE ACTION

### 17.1 Scope

This section addresses the measures to assure that conditions adverse to quality are identified and corrected as soon as practical. This section also establishes the procedures which The Robert Irsay Company will follow to document and report to executive management the identification, cause and corrective action to prevent recurrence of conditions adverse to quality.

### 17.2 Definition of the Corrective Action Request

When conditions adverse to quality such as failures, malfunctions, deficiencies, deviations, defective materials and equipment or other non-conformances are identified, they shall be promptly corrected in accordance with the procedures for non-conformance control set forth in the preceding section. When a condition is judged to be significantly adverse to quality or is indicative of a trend, then those conditions shall also be documented and reported to RICO executive management in accordance with the procedure for the Corrective Action Request outlined in this section.

### 17.3 Examples of Conditions Significantly Adverse to Quality

Safety related materials, parts and components which are at one time acceptable and which subsequently fail or prove deficient or defective.

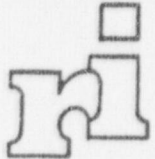
Repetitive deficiencies which are indicative of a negative trend and which are the apparent result of failure to correct the cause of these conditions.

Programmatic deficiencies identified as findings by internal or external (client or regulatory agency) audits.

### 17.4 Procedure for Use of the Corrective Action Request

The Corrective Action Request (CAR) will usually be initiated by a member of the QA/QC Department, however, any RICO employee who recognizes the need for a CAR may initiate the request.

The individual initiating the CAR shall describe the

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2	4-28-89	<i>Shawell</i>	<i>Chambers</i>								
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ROBERT IRSAY COMPANY				QUALITY ASSURANCE MANUAL	<table border="1"><tr><td>SECT</td><td>PAGE</td><td>REV</td></tr><tr><td>17</td><td>1</td><td>2</td></tr></table>	SECT	PAGE	REV	17	1	2
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17.0 CORRECTIVE ACTION CONT.

17.4 Procedure for Use of the Corrective Action Request cont.

condition and recommended corrective action and action to prevent recurrence, if known.

If the condition involves a material, part or component, the description and specific identification data should be included. If a nonconformance report has been written the NCR number should be listed.


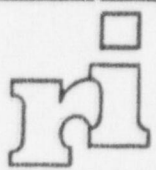


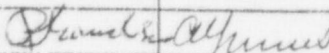
The CAR should be directed to the Vice-President Nuclear Group with duplicate copies to the Q.A. Manager and the appropriate RICO supervisor. The RICO supervisor shall review the problem, investigate the cause, review the recommended corrective action and action to prevent recurrence and either concur or propose alternatives. When completed the CAR shall be forwarded to the Vice-President Nuclear Group.

The V.P.-Nuclear Group shall review and evaluate all of the facts and recommendations - consulting with the Q.A. Manager as he deems appropriate - in order to assure that the true cause of the condition has been determined and that the corrective actions will remedy the problem and provide a reasonable assurance to preclude recurrence of the condition. When the appropriate actions have been determined, the V.P.-Nuclear Group shall direct the appropriate individuals to implement the actions, which shall be documented on the CAR and verified by the Quality Control Department.

Completed Corrective Action Requests and associated documentary evidence shall be retained in the Q.A. Records.

17.5 Action to Correct Audit Findings

When an audit, either internal or external results in findings that identify programmatic deficiencies, RICO will utilize the Corrective Action Request to assure that actions to correct the finding are appropriate and uniformly implemented throughout the program. Additionally, the CAR will assure that RICO management is involved in directing actions to effectively prevent recurrence of the finding.

											
											
											
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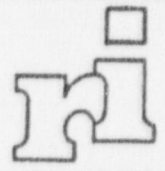


17.0 CORRECTIVE ACTION CONT.

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17.5 Action to Correct Audit Findings cont.

Upon receipt of an audit report the Q.A. Manager will carefully review the report for any findings and evaluate them to determine if they represent program deficiencies or another cause. Findings which require a change or addition to the program to correct will be considered programmatic, and in addition to the direct response to the finding will be the subject of a Corrective Action Request.

CAR's to correct and prevent recurrence of audit findings will be handled identically to other CAR's. A file of all CAR's will be maintained in the Q.A. Records. CAR's dealing with audit findings will be included in the annual management review as an added verification to assure that corrective actions are preventing recurrence of the finding.

											
											
											
2	4-28-89	<i>Donald</i>	<i>Refused</i>								
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## CORRECTIVE ACTION REQUEST (CAR)

TO: C. R. James  
Executive Vice President

SUBJECT: Nonconformances  
Identified in N.R.C.  
Inspection Report  
No. 99900742/89-01

Duplicate Copy To:

- ☐ Vice President - Nuclear Group  
☐ Q.A. Manager

Note: If material part, component or  
equipment is involved:  
DR No.: N/A  
NCR No.: N/A

The adverse condition described below requires immediate corrective action.

Your reply is requested by: May 5, 1989

- ☐ Shop Q.C. Techn.  
☐ Site Q.C. Techn.

Description of Condition: The subject N.R.C. Report identified two non-conformances and referenced several items requiring assured follow-up action. This request is written to assure that necessary corrective actions and actions to prevent recurrence are implemented.

Recommended Corrective Action:

See attached list of conditions and required actions.

Action Specified By Addressee:

Concur with corrective actions recommended.

Signed:

*C. R. James Jr.*

Date:

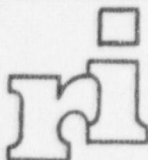
*5/5/89*

Corrective Action will be  
Implemented by: 6-15-89  
(Date)

Action Implemented: The corrective action described below has been implemented and satisfactorily meets the intent of the request.

CAR cleared by Q.C. Technician

Date:



☐ Copy of cleared CAR to log

**ROBERT IRSAY COMPANY**  
(Form 25)

Job No.:  
Q.A. Program

Date:  
5-4-89

CAR No.:  
89-02



CORRECTIVE ACTION REQUEST 89-02

Recommended Corrective Actions:

Condition

N.R.C. Nonconformance 89-01-01

Action Required

Verify N.R.C. acceptance of Corrective Action and Action to Prevent Recurrence.

Q. A. Manager to make controlled distribution of revision to Q.A.M. Section 2.4.

Indoctrinate all personnel in Q.A.M. revision and direct implementation at the appropriate time.

N.R.C. Nonconformance 89-01-02

Verify N.R.C. acceptance of Corrective Action and Action to Prevent Recurrence.

Q. A. Manager to make controlled distribution of revision to Q.A.M. Section 17.

Indoctrinate all personnel in Q.A.M. revision and direct implementation.

Report Para. E.3., Review of Control of Design Drawings FAB Ticket Format

Q. A. Manager to review FAB ticket formats and determine optimum to be used uniformly for all future projects.

Incorporate format selected into Appendix of Q.A.M.

Report Para. E.8., Identification of Q-List Purchase Orders

Q. A. Manager and Purchasing Agent to establish procedure to identify Q-List Purchase Orders with appropriate language.

NOTE: This has been implemented. The description of all Q-List procurements begins with the statement, "NUCLEAR SAFETY-RELATED ORDER."

Report Para. E.9.a.2., Independent Internal Audit for July 1989

The next internal Q. A. Audit of the home office scheduled for July 1989 must be conducted by an auditor other than the Q. A. Manager.



## THE ROBERT IRSAY COMPANY

### RESPONSE TO NONCONFORMANCE 89-01-01

#### Description of Nonconformance:

Contrary to Criterion X of Appendix B to 10 CFR 50, and Subsection 11.4 of Section 11 of the RICO Quality Assurance Manual (QAM), inadequate weld inspections were performed on fabricated ductwork in that stitch welds, attaching stiffeners to the ductwork, did not meet the design drawing requirements. The ductwork was documented as acceptable and shipped as meeting the applicable design drawing requirements.

#### RICO Comment:

The welds involved were 1/16" intermittent fillet welds 2" in length which were to be staggered on opposite sides of angle stiffeners at intervals of 8" (maximum) per side. Instead, because the weld symbol shown in the Duct Construction Brochure was misinterpreted, the welds were spaced at intervals of 8" but between welds on opposite sides of the stiffeners as opposed to 8" per side as required.

Investigation into the cause of the error revealed that the welder, shop supervisor and inspector all believed they understood the true meaning of the weld symbol and therefore all thought the work to be correct and in compliance with the requirements. There was no evidence of dereliction of duties or deliberate intent to deceive. In fact, from the experienced observers point of view, the stiffener weld placement was visually consistent with the weld spacing on the companion angle flanges (1/16" welds, 2" long on 8" centers) and the usual standards for ductwork construction which generally provide the same or fewer number of welds on stiffeners than on companion angle flanges.

#### Corrective Action:

The actions to correct the condition cited included Nonconformance Reports which were written by both Irsay and Commonwealth Edison Co. to identify the nonconforming items and to solicit an engineering evaluation of the ductwork as-built. Upon evaluation and review, Commonwealth Edison Nonconformance Reports #641 at Dresden and #17-88 at Quad Cities dispositioned the ductwork suitable for use. Corrective action by Irsay included indoctrination and training of the welders, supervisors and quality control inspectors in the correct interpretation of the welding symbols for staggered and intermittent fillet welds.





Action to Prevent Recurrence:

In addition to training in the correct interpretation of welding symbols in question, personnel responsible for shop fabrication and inspection received training in the use of AWS document, Symbols for Welding and Nondestructive Testing, AWS 2.4 and were instructed to consult this document to obtain the correct interpretation of welding symbols in the future. Training was completed on October 27, 1988. Subsequent fabrication of ductwork and stiffener welding was performed correctly and without a repeat of these errors.

Also, The Robert Irsay Company's Q. A. Manual Section 2.4, "Policies, Procedures and Special Processes" has been amended to indicate that all personnel are to be indoctrinated in the particulars of all applicable procedures and special process requirements prior to the beginning of fabrication on actual work. A copy of the revised manual section is enclosed.

The following indoctrination was conducted relative to the QA/QC program for the DRESDEN/QUAD CITIES project:

SUBJECT: THE INTREPRETATION AND CORRECT MEANING  
OF THE WELD SYMBOL FOR INTERMITTENT AND  
STAGGERED FILLET WELDS WAS REVIEWED WITH  
SHOP SUPERVISORS, INSPECTORS AND WELDERS.  
COPIES OF AWS A2.4 FIG. 14C WERE REVIEWED  
AND DISTRIBUTED.

ATTENDEES:

Shawzleh  
Ed Mirek  
Carl R. Lohm  
Patricia Johnson  
John A. Blum  
William H. Hirsch

SUMMARY OF DETAILS: THE WELDING DETAIL FOR ATTACHING  
RECTANGULAR DUCT STIFFENERS IN ACCORDANCE  
WITH DUCT CONSTRUCTION BROCHURE DETAIL ON  
PAGE DB-10, REV. 1 WAS REVIEWED. ALL WERE  
INSTRUCTED THAT THE CORRECT ~~DETAIL~~ INTREPRETATION  
OF THE DETAIL IS SHOWN IN FIG. 14C OF AWS.  
A2.4

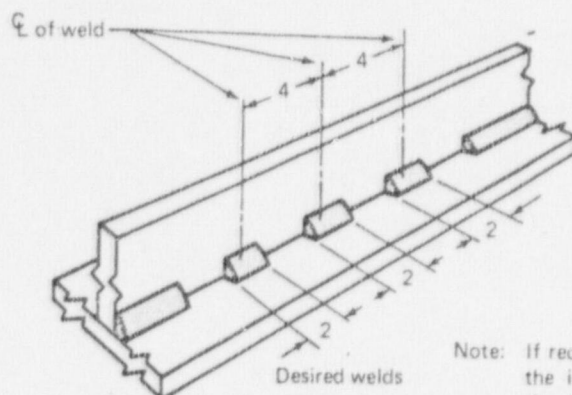


Conducted By: Shawzleh

Date: 10-27-98

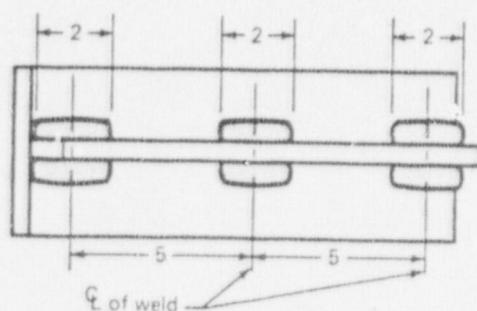
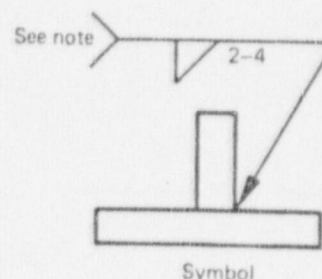
ROBERT IRSAY COMPANY

PERSONNEL INDOCTRINATION RECORD



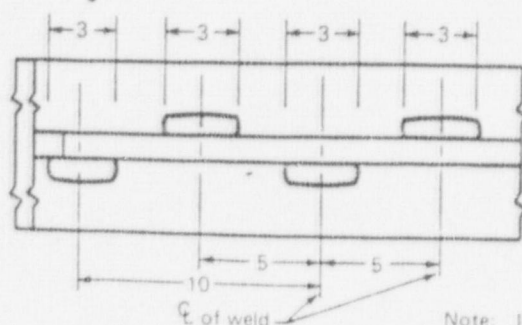
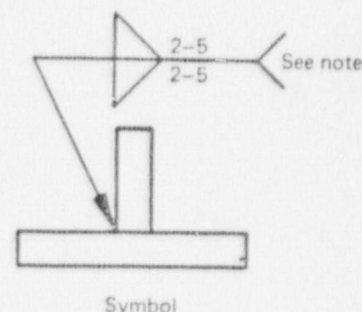
Note: If required by actual length of the joint, the length of the increment of the welds at the end of the joint should be increased to terminate the weld at the end of the joint.

(A) Length and pitch of increments of intermittent welding



Note: If required by actual length of the joint, the length of the increment of the welds at the end of the joint should be increased to terminate the weld at the end of the joint.

(B) Length and pitch of increments of chain intermittent welding



Note: If required by actual length of the joint, the length of the increment of the welds at the end of the joint should be increased to terminate the weld at the end of the joint.

(C) Length and pitch of increments of staggered intermittent welding

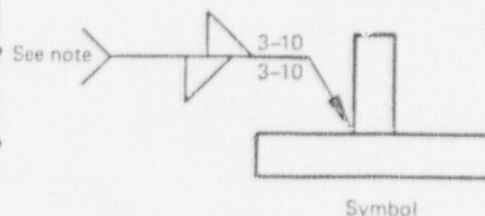


Fig. 14—Application of dimensions to intermittent fillet weld symbols



## 2.0 QUALITY ASSURANCE PROGRAM - continued

### 2.3 Structures Systems or Components - continued

Soon after award of contract but prior to proceeding with any safety related work, RICO will prepare a list which will identify the quality assurance/quality control classifications as designated in the contract documents together with the corresponding RICO quality assurance classification. The list will also identify the documentation required for each classification together with the applicable RICO documents or forms which are required to provide same. It is normal policy within RICO to identify safety related systems as "Q-List" and Non-safety related systems as "NNS." This list will be prepared as outlined in the Design Control Section 4 of this manual.

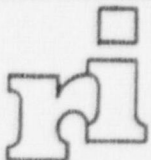
This will assure that structures, systems, or components to be covered by the quality assurance program are identified.

### 2.4 Policies, Procedures, and Special Processes

Soon after award of contract but prior to proceeding with any safety related work, the Project Manager and the Quality Assurance Manager will review the scope of work with a view to assuring that RICO's Quality Assurance Program addresses all of the QA/QC policies, procedures and special process requirements of the contract.

A list will be prepared identifying supplemental procedures such as testing, balancing, welding and similar procedures. See the Design Control Section 4 of this manual for details. The list of supplemental procedures will be submitted to the client for review or approval if required by the contract.

As a part of the pre-work preparation process, the Q.A. Manager will verify that measures are in place to assure that all involved members of the shop, field and home office organizations are indoctrinated in the specific requirements of these policies, procedures and special processes. Indoctrination shall be documented and the content reviewed by supervisory personnel prior to implementation to assure that details are correctly interpreted, conveyed and understood by all members of the organization.

						
2	4-28-89	<i>[Signature]</i>	<i>[Signature]</i>			
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