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**Detroit  
Edison**

August 24, 1979  
EF2-46,921

50-341

Mr. G. Fiorelli, Chief  
Reactor Construction and  
Engineering Support Branch  
U.S. Nuclear Regulatory Commission  
Region III  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Dear Mr. Fiorelli:

Subject: Noncompliances at Enrico Fermi Unit II Construction Site

This letter responds to the two (2) infractions and one (1) deficiency contained in your IE Report No. 50-341/79-14. This inspection of Enrico Fermi Unit II Construction Site activities was performed by Messrs. H. S. Phillips, J. Hughes, W. A. Hansen, and J. J. Harrison on June 19-22, 1979.

The cited infractions mentioned in your report are discussed in this reply, as required by Section 2.201 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations. The unresolved items identified in your report have been acted on. We will be prepared to report in detail on our progress and corrective action on these matters to your inspectors on their next visit.

A formal reply to unresolved matter No. 50-341/79-14-01 is included in this response per your special request.

The enclosed response is arranged to correspond to the sequence of items cited in the body of your report. The finding numbers from the report are referenced as well as the section numbers where applicable.

We trust this letter satisfactorily answers the concerns raised in your report. We shall be glad to discuss any further points that you may have.

Sincerely yours,

*C.M. Heindel* /for  
Edward Hines

EH/CM/hr

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THE DETROIT EDISON COMPANY  
QUALITY ASSURANCE DEPARTMENT  
ENRICO FERMI 2 PROJECT

Response to NRC Report No. 50-341/79-14

Docket No. 50-341 License No. CPPR-87

Inspection at: Fermi 2 Site, Monroe, Michigan

Inspection conducted: June 19 - 22, 1979

Prepared by: *H. A. Walker*  
H. A. Walker  
Site Project Q.A. Engineer  
Detroit Edison Company

Approved by: *R. W. Barr*  
R. W. Barr  
Project Q.A. Director  
Detroit Edison Company

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Statement of Unresolved Item 79-14-01

Unresolved Matter: Investigation into allegation that embeds had pulled out of the concrete in the Turbine Building. Engineering is asked to furnish a copy of completed report to the NRC along with the basis for assuring that similar safety-related embeds are adequate to support design loads and tests of existing embeds.

Edison Quality Assurance Department requested the Project Engineer to address this NRC concern. Letters EF2-45,813 dated August 15, 1979 and EF2-45,242 dated June 7, 1979 are available on site for your inspectors to review on their next inspection. The following information is provided as per your request.

Description of the anchor plates, identified on page 4 of your inspection report:

<u>Hanger</u>	<u>Embedment</u>
N21-3109-G01	1 - Plate 12" x 3/4" x 2'0" with 4 Nelson studs 5/8" $\emptyset$ x 8-3/16" H4L
N21-3109-G10	1 - Plate 3/4" x 12" x 4'0" with 8 Nelson studs 5/8" $\emptyset$ x 6-9/16" H4L
N21-3109-G13	1 - Plate 3/4" x 12" x 2'0" with 4 Nelson studs 5/8" $\emptyset$ x 6-9/16" H4L

There was no failure in either the concrete or the plate; however, due to overloading of the temporary hanger and its closeness to the edge of the plate, there was some noticeable bending in the plate.

Nelson Studs Design Aid (embedment properties of headed studs) was used as a basis for establishing the design strength/rated loads. Also, AISC and ACI Codes were used for strength allowables.

The method of engineering used to assure that the design loads are less than the design strength of the anchor plates are as follows:

- a. Plates with Nelson studs: Nelson Studs Design Aid and tables (embedment properties of headed studs) were used.
- b. Plates with anchor straps: The engineering was done by analysis.

Edison Engineering's basis for assuring that installed Q.A. Level I embeds will support the design load, is provided by analyzing each load condition and location.

Testing of embeds is not felt to be necessary; however, engineering has issued a guideline (EF2-45,242) to ensure against future damage due to location or overloading.

Statement of Infraction 79-14-03

Appendix A, Item #1

Section I, Paragraph 3(a & b), pages 10 & 11

Infraction: Contrary to 10CFR50, Appendix B, Criterion VII and the Enrico Fermi II Q.A. Manual. Walbridge Aldinger's (WACO) Quality Assurance program was not evaluated as required. Audits were not conducted prior to or immediately after contract award to assure their Q.A. program was acceptable and implementation adequate. In addition, it was noted that WACO works to AWS D1.1-1972 and design drawings show weld joint configurations to AWS D1.1-1975 & 1977.

3a.

Corrective Action Taken and Results Achieved

The WACO contract was reviewed by an Edison Site Q.A. Engineer on June 22, 1979. Based on this review, the WACO contract was rewritten to include applicable quality requirements and was reissued on June 27, 1979.

Subsequent to the contract review, Edison requested that Daniel Q.A. perform an implementation audit June 25 through June 29, 1979 on Walbridge Aldinger Company for the purpose of determining the effectiveness of the implementation of their work and administrative procedures. The areas audited were Organization, Training, Document Control, and Special Processes. The audit results indicated that the training program needs management emphasis. The basic elements which need corrective action to assure the effectiveness of the training program are:

- A. Definition of the scope and schedule of training efforts.
- B. Implementation of the Training Program to assure procedural compliance.

Responses to the Daniel Q.A. audit were received on 8/10/79. Corrective actions in progress by WACO include:

- A. Procedural revisions.
- B. Training requirements and schedule documented.
- C. Documentation review and updating.

Corrective Action is scheduled to be completed by 8/24/79.

As part of this infraction, an apparent discrepancy concerning the welding code WACO is to use was identified. In way of explanation, different revisions of the AWS Code are specified on the design drawings than in the WACO procedures because the designers prefer to use the latest revision of the Codes in order to conform to newly defined design criteria or construction restrictions at the time of a drawing revision. This does require the Contractor/Daniel/Edison Field Engineering to interrelate the intent of the new design requirements to AWS D1.1-1972, which is the governing code for this construction site. The WACO engineer is presently doing this as verified by your inspectors.

3a.

Corrective Action to be Taken to Avoid Further Noncompliance

Edison has directed that all contractors be notified that Level I purchase orders or contracts or any modifications to these documents require routing through the responsible quality organization in order that a review for pre-qualification and also inclusion of quality requirements can be made. In addition, Edison site generated Q.A. Level I purchase orders and contracts, or any change to a non-QA contract to include Q.A. Level I work, will be routed through Edison Q.A. for review.

Daniel Q.A. will perform follow-up audits on WACO to assure corrective actions are in compliance with procedure requirements. A scheduled audit will be performed by Daniel Q.A. during the last quarter of 1979 as additional follow-up to assure compliance to program requirements.

To clarify which edition of AWS is to be used by WACO, Design Change Notice 2317 dated 7/27/79 was issued and requires all welding to conform to the AWS D1.1-1972 edition of the Code or a later edition as long as it is specified in the Contractor's procedures.

Date When Full Compliance Will Be Achieved

Full Compliance has been achieved.

3b.

Corrective Action Taken and Results Achieved

A training class on Welding Control was held on 6/28/79 and 6/29/79 for WACO welders. It included the following topics:

- 1) Issuing weld filler metal
- 2) Welder qualifications
- 3) Welding procedures and specifications
- 4) Workmanship
- 5) Procedures FWP-V-100, P-1-100 through P-1-111 were emphasized

Work procedures and parameters are now located in the work areas and welding data sheets are being attached to the Connection Control Sheets (CCS). Daniel Q.C. conducted a surveillance of WACO welding on 8/1/79 and found that they were following approved procedures.

Corrective Action to be Taken to Avoid Further Noncompliance

Procedures are being revised to have weld process sheets show the weld parameters.

Daniel Q.C. is providing first line Q.C. coverage of WACO welding and will initiate action to correct any deficiencies they encounter.

3b.

Corrective Action to be Taken to Avoid Further Noncompliance (contd)

Training sessions are in progress for the present revision level of existing procedures. A matrix of procedures versus affected personnel is maintained to assure appropriate training is presented for latest revisions of procedures.

The training program is being clarified in a procedure revision. Daniel Q.A. will perform follow-up audits to assure corrective actions are in compliance with procedure requirements.

Date When Full Compliance Will be Achieved

Full compliance is expected by September 4, 1979.

Statement of Infraction 79-14-04

Appendix A, Item #3  
Section I, Paragraph 3b(2-5), Pages 12-14

Infraction: Contrary to 10CFR50, Appendix B, Criterion XVI, corrective action was not taken to ensure that adequate source inspection was performed on Inland Ryerson furnished drywell structural steel, core spray brackets, and RHR heat exchanger platforms.

3b(2&4)

Corrective Action Taken and Results Achieved

The numerous nonconforming brackets mentioned in your report had been identified through normal implementation of the project's Q.A. program prior to your inspection. The nonconformances had been documented on DDR's. The specific core spray restraint bracket mentioned in Item 3b(2) of your report has been documented on DDR (W)3072 (dated 6/29/79) which supersedes DDR 2774 (dated 4/9/79). Since the problem was identified as generic, each bracket installed by WACO has been examined prior to installation.

Corrective Action to be Taken to Avoid Further Noncompliance

The following action will be initiated to further control this situation:

- o The brackets will be held in a controlled area.
- o The brackets will be Q.C. inspected for acceptance.
- o The brackets will be returned to a controlled area with accept/reject tags as the case may be.
- o The brackets will be released on an individual basis for installation as required.

Date When Full Compliance Will be Achieved

Full compliance is expected by December 1, 1979.

3b(5)

Corrective Action to be Taken to Avoid Further Noncompliance (contd)

These inspections shall include vendors' welding practices and actual witness of required nondestructive examinations.

Daniel Q.C. will continue to perform receipt inspection in accordance with approved procedures.

- b) The adequacy of vendor-furnished material/components will be established through implementation of our present Q.A./Q.C. programs. As problems are identified prior to, in conjunction with, or after installation, they will be identified on DDR's and dispositioned by Edison Engineering per project procedures. When the number of DDR's generated on material supplied by a particular vendor, as in the case of Inland Ryerson, Schreiber, etc., indicates a generic problem exists, a reinspection plan will be developed to ensure the nonconformances have been correctly identified and documented. This reinspection technique has been used repeatedly over the last sixteen (16) months in resolving the problems encountered with the supplied material from the vendors you listed in your inspection report.

The instituting of increased source inspection combined with extensive reinspection, when generic problems are identified, provides assurance that the vendor-supplied material/components on site are adequate.

- c) Edison Quality Assurance will continue to perform audits of vendors of Q.A. Level I and Code products to an extent appropriate for the nature of the products. These audits will be performed before or during manufacture. Because of weld deficiencies identified in Report 50-341/79-14, it is our intention to perform in-depth audits of welding practices at the above-identified fabricators of structural products.

Edison Quality Assurance will continue to monitor Purchasing Inspection reports for evidence of any pattern of vendor nonconforming practices, and in addition, will monitor any site documentation of deficiencies attributable to vendors. Steps will be taken as necessary to bring about appropriate corrective action.

Date When Full Compliance Will be Achieved

- a) Surveillance plans for all current Q.A. Level I and Code procurements will be completed in September, 1979. Full compliance will be achieved in steps as the material receiving the 100 percent source inspection is received on site.
- b) The repair of nonconforming Inland Ryerson supplied buckets is expected to be complete by January 15, 1980.
- c) The Edison Quality Assurance audits of the five manufacturers listed previously will be accomplished by October 15, 1979.

Response to NRC Report #50-341/79-14

3b(3)

Corrective Action Taken and Results Achieved

Surveillance Summary Report (W)1997 dated June 22, 1979, was issued in accordance with QCP-I-01 for response/direction from Detroit Edison Engineering. The disposition is to reinspect Inland Ryerson welds on the RHR heat exchanger platforms in both the North and South RHR heat exchanger rooms, and issue Deviation Disposition Reports as necessary. Edison Purchasing Inspectors will perform 100% source inspection on structural components supplied by Inland Ryerson.

Corrective Action to be Taken to Avoid Further Noncompliance

Daniel Quality Control will inspect RHR heat exchanger room platform welds (Inland Ryerson) for compliance to AWS D1.1-1972 and issue Deviation Disposition Reports as necessary and attach hold tags to nonconforming items.

Date When Full Compliance Will be Achieved

The inspection is expected to be complete by November 1, 1979.

3b(5)

Corrective Action Taken and Results Achieved

Edison General Purchasing Department performed an in-depth review of their source inspection reports for the following material:

- a) Inland Ryerson sacrificial shield wall brackets.
- b) Nonconforming beams welded by Schreiber Manufacturing Company.
- c) G.E. Jet Pumps.
- d) Cable tray supports with defective welds.

This report was submitted to Edison Quality Assurance on August 8, 1979, and is available for your review at your next inspection.

Receiving inspection of material and equipment is accomplished in accordance with Daniel Administrative Procedure AP-VII-03.

Corrective Action to be Taken to Avoid Further Noncompliance

- a) As a result of the General Purchasing Department review of their source inspection operations, they will increase their source inspection to 100 percent on the following vendors furnishing structural items to Fermi 2:
  - o Inland Ryerson/Industrial Fabricating
  - o Schreiber Manufacturing Co., Inc.
  - o Monroe Welding and Engineering Co.
  - o Edison System Construction Department Shops

In the performance of surveillance activities, Purchasing Inspection will use improved checklists which reflect specification requirements in the purchase order.

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Response to NRC Report #50-341/79-14

Statement of Deficiency 79-14-05

Appendix A, Item #2  
Section II, Paragraph 1.b

Deficiency: Contrary to 10CFR50, Appendix B, Criterion VIII, identification of vertical cable trays was not adequately maintained throughout installation. The identification markers located inside of the trays were not visible once cables were placed in the trays.

Corrective Action Taken and Results Achieved

The cable trays pointed out by the inspector have had their identification numbers verified and the trays have been reidentified. The installation of a cinder block wall after the Q.C. acceptance of the tray caused this problem by obscuring the tray's original identification numbers.

Corrective Action Taken to Avoid Further Noncompliance

All vertical trays will be reinspected for inadequate identification where cinder block walls have been installed and reidentified as required by Edison Project Specification 3071-128, Standard EE-4-1, Revision P.

Date When Full Compliance Will be Achieved

Full compliance was achieved on August 17, 1979.

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