

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Reports No. 50-440/80-13; 50-441/80-12

Docket Nos. 50-440; 50-441

Licenses No. CPPR-148; CPPR-149

Licensee: The Cleveland Electric Illuminating Company
Post Office Box 5000
Cleveland, OH 44101

Facility Name: Perry Nuclear Power Plant, Units 1 and 2

Inspection At: Perry Site, Perry, OH

Inspection Conducted: July 30 - August 1, 1980

Inspectors: *C. E. Jones for*
J. E. Konklin

8-27-80

W. J. Key
for W. J. Key

8/27/80

Approved By: *C. C. Williams for*
C. C. Williams, Chief
Projects Section 2

8-28-80

Inspection Summary

Inspection on July 30 - August 1, 1980 (Report No. 50-440/80-13; 50-441/80-12)

Areas Inspected: Licensee and contractors' procedures, work activities, and QA records related to design control; procedures and work activities related to installation of containment penetrations; work activities and radiographic records related to installation and welding of reactor coolant loop piping; work activities related to installation and welding of other safety-related piping. This inspection involved a total of 44 on-site inspector-hours by two NRC inspectors.

Results: No items of noncompliance were identified.

DETAILS

Persons Contacted

Principal Licensee Employees

- *M. Edelman, Manager, Nuclear QA Department
- *G. Groscup, Manager, Nuclear Engineering Department
- *W. Kacer, General Supervising Engineer, CQS
- *R. Vondrasek, Supervisor, Quality Engineering
- *E. Riley, Contracts Manager
- *P. Martin, General Supervising Engineer, PQS
- *J. Kline, General Supervising Engineer, NED
- *B. Barkley, General Supervising Engineer, Design

Other Personnel

- *D. Fitzpatrick, Site Construction Manager (KEI)
- *T. Arney, Site Program Manager (GAI)
- *P. Gibson, CQC Supervisor (KEI)
 - R. Crofton, Construction Quality Engineer (GAI)
 - R. Williams, Construction Quality Engineer (GAI)
 - G. Parker, Construction Quality Engineer (GAI)
 - R. Mathews, Construction Quality Engineer (GAI)
 - K. Pech, Assistant Site Manager (GAI)
 - B. Ware, Supervisor (GE I&SE)
 - J. Cnaan, QC Engineer (GE I&SE)
 - J. Steele, QA Supervisor (Pullman)
 - J. McPherson, NDE Supervisor (Pullman)

Accompanying NRC Personnel

- *C. Williams, Projects Section Chief, RIII
- *J. Hughes, Perry Resident Inspector, RIII
- *T. Gibbon, Commission Staff, HQ

*Denotes those present at the exit meeting on August 1, 1980.

The inspectors also contacted other licensee and contractor employees, including craftsmen and members of the quality, technical, and engineering staffs.

Section I

Prepared by J. E. Konklin

Reviewed by C. C. Williams, Chief
Projects Section 2

Review of Licensee's Design Control System

The RIII inspector initiated a review of the licensee's site design control system to determine whether adequate procedures are in place for design control, whether the procedural requirements are being satisfactorily implemented by the licensee and by the site contractors, and whether the site quality assurance records accurately reflect the results of the design control activities.

During this inspection the inspector reviewed the licensee's procedures related directly to design control, the General Electric Company QA requirements related to design control, and selected design change documentation related to the nuclear steam supply system (NSSS) installation activities being performed by General Electric. Other areas of site design control will be reviewed routinely in future inspections.

1. Site Design Control Requirements

The inspector reviewed the following requirements documents, which include twelve site-wide procedures relating to design control and the General Electric QA manual section relating to design control:

- a. CEI Corporate Nuclear Quality Program Procedure 0300, Revision 1, effective November 5, 1979, "Design Control".
- b. GAI Interface Procedures, Volume 4, Procedure 4-0200, Revision 6, dated January 15, 1980, Section 3.0, "Design Assurance".
- c. CEI Nuclear Design and Procurement Instruction 35-0605, Revision 1, effective October 24, 1979, "Perry Construction Work Authorization".
- d. CEI Nuclear Design and Procurement Instruction 35-0606, Revision 1, effective March 14, 1980, "Processing Construction Engineering Change Notices".
- e. CEI Nuclear Design and Procurement Instruction 35-0607, Revision 0, effective April 25, 1980, "Processing Fabrication Engineering Change Notices".
- f. CEI Nuclear Design and Procurement Procedure 3-0301, Revision 1, effective July 30, 1979, "Field Variance Authorization".

- g. CEI Nuclear Design and Procurement Procedure 3-0302, Revision 3, effective March 14, 1980, "Construction Specification - Related Engineering Change Notices".
- h. CEI Nuclear Design and Procurement Procedure 3-0303, Revision 2, effective March 14, 1980, "Construction Drawing - Related Engineering Change Notices".
- i. CEI Nuclear Design and Procurement Procedure 3-0305, Revision 0, effective March 14, 1980, "Field Disposition Instructions/Field Deviation Disposition Requests."
- j. CEI Nuclear Design and Procurement Procedure 3-0306, Revision 0, effective April 25, 1980, "Fabrication Engineering Change Notices".
- k. CEI Nuclear Design and Procurement Procedure 3-0350, Revision 1, effective May 16, 1980, "Construction Changes".
- l. CEI Corporate Nuclear Quality Assurance Program Procedure 0500, Revision 1, effective November 5, 1979, "Instructions, Procedures, and Drawings".
- m. CEI Construction Quality Section Procedure 2-0303, Revision 1, effective April 9, 1980, "Field Design Change Review".
- n. GE's General Nuclear Quality Assurance Manual for the Perry Nuclear Power Plants, Revision 0, dated December 10, 1979, Section 3.0, "Design Control".

2. Review of Specific Design Changes

The inspector reviewed selected CEI and GAI records relating to design changes, including logs or files for nonconformance reports (NR's), engineering change notices (ECN's), field questions (FQ's), field variance authorizations (FVA's), field disposition instructions (FDI's), field deviation disposition requests, (FDDR's), corrective action requests (CAR's), and construction work authorizations (PCWA's).

The inspector selected at random and reviewed five FDDR's and one FDI relating to General Electric activities and five FQ's relating to Newport News activities and then located and reviewed the ECN's and FVA's associated with the FDI and the FQ's. The following specific documents were reviewed:

- a. FDCR No. KL1-045, dated December 7, 1979, titled, "RPV Recirc Nozzle Modification".
- b. FDDR No. KL1-050, dated January 8, 1980, titled, "RPV Recirc Nozzle Modification".

- c. FDDR No. KL1-057, dated February 15, 1980, titled, "Reactor Vessel".
- d. FDDR No. KL2-030, dated April 8, 1980, titled, "RPV Nozzle Modification".
- e. FDDR No. KL1-064, dated May 15, 1980, titled, "Recirc Discharge Block Valve".
- f. FDI No. 41/82412, Revision 0, dated June 20, 1980, titled, "Inclined Fuel Transfer System (IFTS)", and the associated ECN No. NH05214, issued on May 9, 1980.
- g. FQ No. 8210, dated May 23, 1980, titled, "Unit 2 Upper Drywell Liner", and the associated ECN No. 4588-96-61, dated May 22, 1980.
- h. FQ No. 8216, dated May 27, 1980, titled, "Unit 1 Polar Crane Girders", and the associated FVA No. 2037-17-15.
- i. FQ No. 8248, dated May 28, 1980, titled, "Unit 1 Personnel Access Lock Shield Doors and Monorail", and the associated ECN No. 4703-85-85, dated June 11, 1980.
- j. FQ No. 8707, dated June 23, 1980, titled, "Unit 1 Personnel Airlock Shield Doors", and the associated ECN No. 4875-96-64, dated July 7, 1980.
- k. FQ No. 8733, dated June 9, 1980, titled, "Unit 1 Embedment Plate - Upper Drywell Wall", and the associated FVA No. 2093-96-48.

The inspector also reviewed sixteen other ECN's selected at random to determine whether appropriate QA involvement had been obtained.

3. CEI/GAI/GE Interface

Based on the review of procedures and design change documents noted above, the inspector discussed with the licensee and with GAI engineering personnel the interfaces between CEI/GAI and General Electric for the NSSS installation work. The inspector expressed concern regarding two interface areas:

- a. FDI's and FDDR's initiated by General Electric are reviewed by GAI only for interface considerations, and not for engineering adequacy.
- b. On the FDI and FDDR's reviewed, there were no CEI or GAI QA reviews noted and the CEI procedures do not appear to require such a QA review. In addition, a CEI audit of General Electric in late April 1980 found that GE has not been performing QA/QC reviews on FDDR's.

The licensee informed the inspector that a significant effort is underway to redefine the CEI/GAI/GE interfaces, including the planned issuance of new procedures.

The inspector informed the licensee that this will be designated an unresolved item (50-440/80-13-01; 50-441/80-12-01) pending review of the licensee's corrective actions during future RIII inspections.

No items of noncompliance were identified.

Section II

Prepared by W. J. Key

Reviewed by D. H. Danielson, Chief
Engineering Support Section 2

1. Containment Penetrations

The following Pullman welding, quality control and installation procedures for piping and penetrations were reviewed by the inspector:

Welding Procedures

GWS-CS-III, General Welding Standard for Welding ASME-P1, Carbon Steel Materials

1T1-III-1-K1-12, P1 to P1

1T1-III-1-BR-2, P1 to P1

1T10-III-1-OB0-1, P1 to P1

1T11-III-1-OB-2, P1 to P1

1T12-III-1-OB-12, P1 to P1

13-III-1-OB-2-F3/F4, P1 to P1

GWS-SS-III, General Welding Standard for ASME P8 Stainless Steel Materials

24-III-8-K1-12, P8 to P8

26-III-8-OB-2 P8, to P8

408-III-45-OB-1, P45 go P45

Quality Control Procedures

11-4, Inspection and Testing Personnel Control and Administration of Training, Examination, Qualification and Certification

11-8, Welder Performance Qualification

VIII-3, Control of Welding Materials (Field)

IX-3, Fabrication and Field Installation Specification for Nuclear Power Plant Components, Piping Systems and Appurtenances

XIII-11, Standard Method of Protecting Ends of Fabricated Pipe for Nuclear Service

Personnel Qualifications

Qualification records of the following NDE and welder personnel were reviewed for the requirements of ASME Section III and IX.

Welder Qualifications

E. Hiam Stamp BX
S. J. Birch Stamp KG
D. M. Wigner Stamp TA

NDE Qualifications

	RT	PT	MT	UT	VT
J. McPherson	II	II	II		
J. Steele	III	III	III	III	III
J. Mevey	I	II			
D. Denlinger	I	II			

Weld Material Control

The inspector examined the warehouse storage facility for welding materials and issuance to the field rod rooms. The inspector also examined control at rod issue room at elevation 599' in the auxiliary building.

The following storage ovens and portable rod ovens were examined for calibration and contents.

Rod oven S/N-3
Rod oven S/N-10
Rod oven S/N-12
Rod oven S/N-13

Portable ovens, S/N-39, 167, 82 and 135.

Chemtron electrodes E7018
Heat No. 401B4021-3/32"
Heat No. 402B1441-1/8"
Heat No. 432A7641-5/32"

Master Dial Thermometers S/N-FMO-500/GKO-501

Observation of Activities

The inspector observed the fit-up, tack welding, and root pass welding of suppression pool suction penetration No. P-102 to containment vessel sleeve and work in-process on penetrations P-103, P-401, P-402, P-403, and P-101.

In-process welding on the residual heat removal system, weld No. 09 on ISO 1-E12-41, and weld No. 14, on ISO 1-E12-31, were observed. The inspector reviewed radiographs of the following completed welds in the following systems.

RHR system, ISO 1-E12-35, Welds No. 06 and 05
Low pressure core spray system (LPCS)

ISO 1-E21-3, Weld No. 04
ISO 1-E21-7, Weld No. 01

No items of noncompliance or deviations were identified.

2. Safety Related Piping

Procedures

The following GEI and SE procedures were reviewed by the inspector.

GWP-1003, Welder Performance Qualifications
GWP-1010, Weld Metal Control and Storage
GEP-1010, Weld Metal Control and Storage
GEP-AP-0012, Examination and Testing Personnel Qualification and Certification
GEP-GQI-0005, Material Control
GWP-1000, General Welding Procedure for Nuclear Services Projects
GWP-1001, General Weld Repair Procedure

Observation of Activities

During this inspection the inspector observed work being performed on the following:

Fit-up and welding of main steam quencher S/N-8CN770-8A18

Alignment and tack welding of main steam quencher 8CN770-8A7

Reviewed traveler T1-B-21-07 for main steam quencher 8CN770-8A4

The inspector examined the rod issue room for GE I&SE located in the auxillary building and checked rod ovens and control of portable ovens for calibration and control

No items of noncompliance or deviations were identified

Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable items, items of noncompliance, or deviations. An unresolved item disclosed during the inspection is discussed in Section I, Paragraph 3.

Exit Interview

The inspectors met with licensee representatives (denoted under Persons Contacted) at the conclusion of the inspection on August 1, 1980. The inspectors summarized the purpose and findings of the inspection. The licensee acknowledged the findings reported herein.