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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

APR 17 1975

Commonwealth Edison Company
ATTN: Mr. R. L. Bolger
Assistant Vice President
P.O. Box 767
Chicago, Illinois 60690

Docket No. 50-237

Gentlemen:

This refers to the inspection conducted by Mr. C. M. Erb of this office on March 17, 18, 21 and 25, 1975, of activities at Dresden Unit No. 2 authorized by License No. DPR-19 and to the discussion of our findings with Mr. Stephenson, Mr. Roberts and others of your staff at the conclusion of the inspection.

A copy of our report of this inspection is enclosed and identifies the area examined during the inspection. Within this area, the inspection consisted of a selective examination of procedures and representative records, interviews with plant personnel, and observations by the inspector.

No items of noncompliance with NRC requirements were identified within the scope of this inspection.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you or your contractors believe to be proprietary, it is necessary that you make a written application to this office, within twenty days of your receipt of this letter, to withhold such information from public disclosure. Any such application must include a full statement of the reasons for which it is claimed that the information is proprietary, and should be prepared so the proprietary information identified in the application is contained in a separate part of the document. Unless we receive an application to withhold information or are otherwise contacted within the specified time period, the written material identified in this paragraph will be placed in the Public Document Room.

No reply to this letter is necessary; however, should you have any questions concerning this inspection, we will be glad to discuss them with you.

Sincerely yours,

Gaston Fiorelli, Chief
Reactor Operations Branch

Enclosure:
IE Inspection Report No.
050-237/75-08

cc: B. Stephenson
Station Superintendent

bcc: IE Chief, FS&EB
IE:HQ (4)
Licensing (4)
Central Files
IE Files
PDR
Local PDR
NSIC
TIC
Anthony Roisman, Esq.

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

REGION III

Report of Construction Inspection

IE Inspection Report No. 050-237/75-08

Licensee: Commonwealth Edison Company
P.O. Box 767
Chicago, Illinois 60690

Dresden Unit No. 2
Morris, Illinois

License No. DPR-19
Category: C

Type of Licensee: BWR (GE) - 809 MWe

Type of Inspection: Special, Announced

Dates of Inspection: March 17, 18, 21 and 25, 1975

Dates of Previous Inspection: March 11-14, 1975 (Operations)

Principal Inspector: C. M. Erb C.M. Erb 4/16/75 (Date)

Accompanying Inspectors: F. J. Jablonski F.J. Jablonski 4/16/75 (Date)
March 18, 1975 by CME.

Other Accompanying Personnel: D. M. Hunnicutt
March 17, 1975

J. C. LeDoux
March 17, 1975

Reviewed By: D. M. Hunnicutt, Senior Reactor Inspector (Acting) D.M. Hunnicutt for 4/16/75 (Date)
Construction Branch

SUMMARY OF FINDINGS

Enforcement Action

A. Violations

None were identified.

B. Safety Matters

None were identified.

Licensee Action on Previously Identified Enforcement Matters

Not applicable.

Design Changes

None identified.

Unusual Occurrences

None identified.

Other Significant Findings

A. Current Findings

1. Status of the Safety Analysis for the Design Modification in the Dresden Unit No. 2 Core Spray System

   The plant superintendent, in a phone conversation, stated that a safety review of the proposed design change had been made and signed off by the Dresden Operations Site Review (DOSR). The calculations on which this review are based are available at the site and will be used to implement the requirements of paragraph 50.59 of Title 10 Part 50, Code of Federal Regulations.

2. Instrumentation of Bypass Core Spray Piping

   The inspector was informed that General Electric Company (GE) is installing instrumentation on the four-inch bypass recirculation piping and the ten-inch core spray piping on Dresden Unit No. 2 to determine stress and vibration conditions after startup.

B. Unresolved Matters

Usage of Clad Safe Ends

In the original design, safe ends were intended to be made of Type 316 stainless steel tube, with the inside surface clad 100% with a weld deposit of Type 308 material. Due to unforeseen circumstances, these clad safe ends may not be available when needed, and consideration is being given to using unclad stainless steel safe ends. This matter should be resolved shortly and, if made, this design change will be checked by the inspector.

C. Status of Previously Reported Unresolved Matters

Not applicable.

Management Interview

A. The following personnel attended a meeting on March 17, 1975, at the Dresden site where the plans and requirements for the core spary replacement pipe program were discussed.

Commonwealth Edison Company (CE)

B. Stephenson, Plant Superintendent
A. Roberts, Assistant Plant Superintendent
J. McGeachy, Station Nuclear Engineering
E. Eenigenburg, Station Nuclear Engineering
R. Stone, Quality Assurance Engineer
R. Wlodek, Quality Assurance Engineer
M. Turbak, Site Technical Staff
R. Meadows, Engineering Assistant

General Electric Company (GE)

G. Wells, Installation and Service Engineering (I&SE)
G. Crossley, Quality Assurance - I&SE

Illinois State Inspection

S. C. Lindbeck, Inspector

Hartford Steam Boiler & Insurance Company (Hartford)

A. S. Jimenez, Inspector

B. Matters discussed and comments, on the part of management personnel were as follows:

1. The inspector asked if a QA manual was available from the contractor responsible for the job. The licensee said they had a manual from GE I&SE, which had been approved and was available to NRC.

2. The inspector asked what code would be used for the replacement piping. The licensee stated that ASME Section 1 would apply, where used as the original construction code requirement, and that Piping Code B31.1.0-1965 would apply for the balance of the piping.

3. The inspector asked who would have direct reponsibility for the modification, and the licensee stated that GE would supply procedures, supervision, and materials, except for the four stainless valves in each loop which will be reused. The piping spools will be carbon steel to Specification SA-106, Grade B, from the safe end out to the containment penetration. The original stainless steel pipe in the penetration will be reused, with a penetrant test of the inside surface. Carbon steel piping will replace the stainless pipe outside the penetration to the second isolation valve. The two safe ends will be Type 316 stainless steel and will be clad on the inside surface with Type 308 weld overlay.

   M. W. Kellogg Company (Kellogg) is furnishing the carbon steel spools, and each spool will have a stainless overlay on the ends. Machining for the weld preparation will be on this weld overlay, so that the field welds will involve joining stainless steel to stainless steel.

   Although not required by code, the carbon steel piping has been subjected to an ultrasonic test and, also, to notch toughness tests.

   Upon completion of the modification, a hydrotest to 1.1 times operating pressure is to be performed at a temperature of 200°F minimum. Safety valves will be gagged. Also base-line UT inspection is to be performed after the hydrotest.

REPORT DETAILS

Persons Contacted

In addition to the personnel listed in the Management Interview Section of the report, the inspector contacted the following:

General Electric Company (GE)

V. Bain, Site Quality Control Supervisor - Level III, Radiography and Penetrant Test
J. Taylor, Quality Control Inspector - Level II, Penetrant Test
B. Miller, Quality Control Inspector - Level II, Penetrant Test

Results of Inspection

1. Examination of Valves and Piping Spools

The inspector examined the weld preparations and the inside of the valves, which will be reused. The weld preparations had a uniform land, and the machining appeared to be satisfactory. The inside surfaces of one gate valve showed that the penetrant test materials had not been removed. The inspector reported this to the licensee and also to the GE quality control inspector, who stated that a cleaning operation would be performed at once.

2. Examination of Welds

The inspector looked at two weld fitups which were ready for welding to begin as soon as the purge had been established. Both fitups were satisfactory and had been provided with two small cut-out windows in the insert, so that the root fusion could be visually checked by the welder's helper.

The inspector examined two weld roots (three passes each) which had been completed using the tungsten inert gas (TIG) process. These welds were satisfactory visually and are subjected to radiography before proceeding with the balance of the weld, which would be made using the Shielded Metal Arc (SMAW) process.

The inspector examined the following completed welds, with results as follows:

Location	Comments
A - Loop W-1	Two areas suck back in root. Acceptable.
A - Loop W-2	Tear, edge of repair area; must be ground and repaired.
B - Loop W-11	Acceptable, small spot tungsten.
B - Loop W-12	Acceptable.

3. Procedures for Welding

The following procedures were examined which are to be used in buttering and welding:

Weld Procedure	To Join	Electrode	Comments
WS 3018	Stainless (P8) to stainless (P-8)	E308L-16, ER308L	6G position
WS 3019	308 (P8) to 316 (P8)	E308L-16, ER308L	5G position in box
WS 3021	SA106 (P1) to P8	309, 308L	Buttering procedure carbon steel pipe

WS 3019 is similar to WS 3018, except that it is performed with restricted accessibility, as will be the case for the safe end to nozzle and safe end to pipe welds, which must be performed in the confines of the biological shield around the pressure vessel.

4. Material Specification

Heat No. 232661, from Jones & Laughlin Steel Company, was certified as the carbon steel pipe material. The spools to be installed inside containment were stamped by Kellogg with an "NPT" stamp and had the weld preparations already machined in the buttered ends of the carbon steel pipe.

The spools to be installed outside containment were not stamped and some ends were still to be buttered. The weld electrodes were certified, and a ferrite determination had been made. Acceptability hinges upon satisfactory toughness tests.

5. Radiography

The inspector looked at radiographs for four completed welds and found that unacceptable defects were being held for repair. The marking and identification were being maintained on the film.

Five exposures per weld, using a double film technique, are to be used because four exposures result in a slight lessening of density at the ends of the film reading area. Welding performance tests were being evaluated using radiography with 25 men qualified.