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

JUN 9 1975

Commonwealth Edison Company  
ATTN: Mr. Byron Lee, Jr.  
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 April 29, May 2, 6, 8 and 14, 1975, of activities at Dresden Nuclear Power Station Unit 2 authorized by NRC Operating License No. DFR-19 and to the discussion of our findings with Mr. L. D. Butterfield, and others of your staff at the conclusion of the inspection.

A copy of our report of this inspection is enclosed and identifies the areas examined during the inspection. Within these areas, 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.



JUN 9 1975

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. 050-237/75-15

cc: Mr. B. Stephenson, Station Superintendent, w/encl

bcc: PDR  
Local PDR  
NSIC  
TIC  
A. Roisman

UNITED STATES NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report of Construction Inspection

IE Inspection Report No. 050-237/75-15

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

Dresden Nuclear Power Station  
Unit 2  
Morris, Illinois

License No. DPR-19  
Category: C

Type of Licensee: BWR (GE) - 809 MWe

Type of Inspection: Special, Construction - Core Spray  
and Four-Inch Recirculation Bypass

Dates of Inspection: April 29 and May 2, 6, 8, and 14, 1975

Dates of Previous Inspection: April 28 and May 12, 1975 (Operations)

Principal Inspector:

*C.M. Erb*  
C. M. Erb

5/30/75  
(Date)

Accompanying Inspectors: None

Other Accompanying Personnel: P. Motelet

J. Tilsner

GAO Observers  
April 29, 1975

Reviewed By:

*for* *W M Hunnicutt*  
J. C. LeDoux,  
Senior Reactor Inspector  
Construction Engineering

5/30/75  
(Date)

## SUMMARY OF FINDINGS

Enforcement Action: None.

Licensee Action on Previously Identified Enforcement Matters: Not applicable.

Design Changes: Not applicable.

Unusual Occurrences: None.

### Other Significant Findings

#### A. Current Findings

1. Construction nondestructive examinations (NDE) were completed on two core spray replacement loops on May 8, 1975, and the hydrotest at 1120 psig was completed about May 13, 1975. The four-inch replacement bypass loops were hydrotested at the same time.
2. One four-inch bypass loop has been instrumented for acceleration, stress, and temperature. Provision has been made to sample the water in one bypass loop.
3. The scram discharge volume modifications have been completed and added supports and hangers installed.

B. Unresolved Matters: None.

C. Status of Previously Reported Unresolved Matters (IE Inspection Report No. 050-237/75-08)

The test results for the core spray replacement have been approved by General Electric Company (GE), Commonwealth Edison Company (CE), and the Hartford Steam Boiler Insurance Company (Hartford) authorized inspector. The inspector determined that the quality assurance procedures and records on materials and welds conformed to USAS Code B31.1.0.

### Management Interview

A. The following persons attended the management interview at the close of the inspection.

#### Commonwealth Edison Company (CE)

L. D. Butterfield, Administrative Assistant  
R. C. Stone, Quality Assurance Engineer  
T. J. Borzym, Quality Assurance Inspector  
G. Bergan, Chemist

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

1. The inspector stated that he had found several editorial errors in the quality assurance records from GE. The quality control supervisor corrected them immediately and stated that further checks on editorial quality would be made.
2. The licensee stated they were performing the ultrasonic base-line test of all welds in the core spray lines, except the safe end to reactor pressure vessel nozzle weld prior to the hydrotest (Operating + 100 psig). This is based on ASME Section XI, 1974, paragraph IWB-2100.

The inspector stated that a UT after hydrotest would appear to be more prudent in-as-much as the design pressure (1250 psig) had been reduced to 1150 psig to justify a thin-walled condition found on the outside of two bends in the replacement A-106 piping. The minimum required wall was 0.513". A minimum wall of 0.467" was found in one bend area. By substituting a design pressure of 1150 psig instead of 1250 psig a minimum wall of 0.400", without corrosion allowance, is obtained.

Adding a 0.002" corrosion allowance for each year of the 31 remaining years of life for the plant results in an allowable minimum wall of 0.462", which is 0.005" below minimum wall readings of 0.467".

The licensee stated that, with concurrence from consultants and code personnel, the two safe end to nozzle welds would be ultrasonically tested after the hydrostatic test, with the balance of the welds having been ultrasonically tested prior to the hydro test. The licensee stated that this procedure for base line inspection was considered to be in accordance with paragraph IWB2100 of the 1974 Section XI Code.

## REPORT DETAILS

### Persons Contacted

The following individuals, in addition to those involved in the management interview, were contacted during this inspection.

#### Commonwealth Edison Company (CE)

R. Meadows, Engineering Assistant  
M. Wright, Quality Control Inspector  
M. Turbak, Coordinator - Core Spray Work

#### General Electric Company (GE)

V. Bain, Quality Control Site Supervisor  
T. Dykes, Quality Control Inspector

### Results of Inspection

#### 1. Quality Documentation for Core Spray Spools and Fittings Supplied M. W. Kellogg Company (Kellogg)

The inspector examined the following documentation and certifications and found them to conform to requirements, except for a below-thickness wall found during loop installation:

Form P-4-A	Certificate shop inspection, signed by Hartford	
Heat B95199	Mechanical properties	Seamless A-106 pipe
SA-234, Grade WPB	Fittings	Ladish Company
Heat 065012	EB inserts	Arcos Corporation
Type 308	Stainless weld rod	Sandvik Steel
Type 309	Stainless weld rod	Sandvik Steel
Type 308L-16	Stainless weld rod	Sandvik Steel

The thin wall problem was in the outer radius of a bend made in the seamless A-106 pipe by Kellogg. It was not discovered until installation of the loop was almost completed. After discovering the condition, extensive thickness measurements by UT were performed, and the exact areas below tolerance were identified and mapped. The condition, and the review action by the licensee and GE, are further explained in the Management Interview Section of this report.

The carbon steel piping in the two loops was subjected to impact tests and was satisfactory to ASME Specification SA-333, Grade 6. Certifications were on file that the piping had been subjected and accepted to magnetic particle test, Specification ES-405, Revision 2, and to ultrasonics test, Specification ES-406, Revision 2. Where stainless buttering of carbon steel was performed, a penetrant test to ES-404, Revision 3, was made.

2. Quality Documentation for Installation from GE

The inspector examined radiographs and signoff QC travelers for the following welds:

<u>Weld Identification</u>	<u>Location</u>	<u>Comments</u>
Loop B2-12-R1	Inside containment	Valve to stainless steel buttering, acceptable repair
Loop B W-11B	Inside containment	Carbon steel to carbon steel
Loop B W-19	Inside containment	Safe end to nozzle
Loop A W-103-A	Outside containment	Carbon steel to carbon steel
Loop A W-103	Outside containment	Stainless to stainless buttering
Loop A W-104	Outside containment	Slight porosity, acceptable
Loop A W-9-R1	Inside containment	Stainless to stainless buttering acceptable repair.

The acceptance standards for radiography are found in the 1974 ASME Code, Section III, paragraph NB-5320. The quality assurance documentation was signed off by GE quality control and by the authorized Code inspector, who is employed by Hartford.

3. Procedure and Personnel Qualifications

The inspector examined the procedure qualifications for welding and found them to conform to ASME Section IX. The welders were also found to be qualified to Section IX and with proper identification.

Ultrasonic Procedure NDT-C-2, Revision 9, was used for the pipe welds and was properly qualified. Calibration standards for this piping system were in conformance to Section XI.

4. Examination of Hardware

The inspector examined the spools prior to and after installation and found piece identification and welder identification to be in order. Several weld preparations and a weld fitup were witnessed and were in conformance to weld requirements of USAS B31.1.0. A penetrant test was witnessed and was found to be satisfactory.

5. Scram Discharge Modification

The inspector noted that this change had been made in the control rod drive system. Four eight-inch pipes are welded to existing four-inch pipes above the CRD modules. Supports and snubbers have been placed around these pipes, which appear to fulfill a seismic requirement.



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