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Sincerely,

John M. Jacobson
John M. Jacobson, Chief
Mechanical Engineering Branch

Docket Nos. 50-237; 50-249
License Nos. DPR-19; DPR-25

Enclosure: Inspection Report 50-237/99017(DRS);
50-249/99017(DRS)

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DATE	01/21/00		01/27/00		01/27/00	<i>1/28/00</i>	

January 28, 2000

Mr. Oliver D. Kingsley
President Nuclear Generation Group
Commonwealth Edison Company
ATTN: Regulatory Services
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: NRC INSPECTION REPORT 50-237/99017(DRS); 50-249/99017(DRS)

Dear Mr. Kingsley:

On December 29, 1999, the NRC completed an inspection at your Dresden Nuclear Power Station, Units 2 and 3. The enclosed report presents the results of that inspection.

The purpose of the inspection effort was to review the implementation of the Inservice Inspection Program to determine whether activities were conducted safely and in accordance with NRC and American Society of Mechanical Engineers Code requirements. Areas examined are identified in the report. Within those areas, the inspection consisted of a selective examination of procedures and representative records, and interviews with personnel.

Based on our inspection, we concluded that the current implementation of your Inservice Inspection Program met Code requirements. During our inspection, however, we identified a violation of 10 CFR 50.55a requirements for not submitting relief requests on limited examinations during the inservice inspection interval that ended in 1992.

At the conclusion of the inspection, the results and findings of this inspection were discussed with those members of your staff identified in the enclosed report. The violation is being treated as a non-cited violation, consistent with Section VII.B.1.a of the Enforcement Policy. The non-cited violation is described in the subject inspection report. If you contest the violation or severity level of the non-cited violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001, with copies to the Regional Administrator, Region III, and the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, D.C. 20555-0001.

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-237; 50-249
License Nos: DPR-19; DPR-25

Report No: 50-237/99017(DRS); 50-249/99017(DRS)

Licensee: Commonwealth Edison Company

Facility: Dresden Generating Station Units 2 and 3

Location: 6500 North Dresden Road
Morris, IL 60450

Dates: December 13 - 29, 1999

Inspector: K. GreenBates, Reactor Inspector

Approved by: John M. Jacobson, Chief
Mechanical Engineering Branch

EXECUTIVE SUMMARY

Dresden Nuclear Power Plant, Units 2 and 3
NRC Inspection Report 50-237/99017(DRS); 50-249/99017(DRS)

This routine inspection focused on the conduct of inservice inspection activities to identify problems which have resulted from inservice use of Class 1 and 2 piping, systems or components. The following specific observations were made:

Maintenance

- The implementation of the inservice inspection program was consistent with Code and regulatory requirements (Section M7).
- A non-cited violation was identified for failure to meet 10 CFR 50.55a requirements on 17 Class 1 and 2 volumetric examinations performed during the previous inservice inspection interval that ended in 1992 (Section M7).
- The nondestructive examination and flaw evaluation procedures complied with American Society of Mechanical Engineers Code, Section XI requirements. Recorded indications were within procedural and Code limits. (Section M3)
- Contractor and licensee personnel performing nondestructive examination were qualified and certified in accordance with regulatory requirements (Section M5).
- The lack of actual field observation of nondestructive examinations undermined the effectiveness of quality assurance audits for the inservice inspection program (Section M7).

Report Details

The objective of the Dresden inservice inspection (ISI) program was to identify problems which have resulted from inservice use of the piping, systems or components. The program addressed the American Society of Mechanical Engineers (ASME), Section XI non-destructive test requirements for examination of Class 1 and 2 components. Units 2 and 3 were in the second period of their third ten year ISI interval, which began in 1992. Unless otherwise stated, "Code" as discussed herein, refers to the 1989 Edition with no Addenda of Section XI, of the ASME Code.

II. Maintenance

M3 Maintenance Procedures and Documentation

M3.1 Review of Nondestructive Examination Data (73755)

a. Inspection Scope

The inspector reviewed selected nondestructive examination and flaw evaluation procedures along with associated examination record data to verify that ISI examinations were being conducted in accordance with ASME, Section XI requirements.

b. Observations and Findings

The visual and liquid dye penetrant procedures reviewed were approved by the Authorized Nuclear Inservice Inspector and were in accordance with ASME Code Section XI requirements.

The inspector reviewed inspection data, flaw indication evaluations, and the associated flaw evaluation procedure NDT-Z-1 "ASME Section XI Flaw Evaluation" for Class 2 weld No.12-32 in the Unit 2 core spray B discharge line. All recorded indications were within procedural and ASME Code limits.

c. Conclusions

The nondestructive examination and flaw evaluation procedures reviewed complied with American Society of Mechanical Engineers Code, Section XI requirements. Recorded flaw indications were within procedural and Code limits.

M5 Maintenance Staff Training and Qualification

M5.1 Nondestructive Examination Personnel Qualifications

a. Inspection Scope

The inspector reviewed the qualification and certification records for selected licensee and contractor Level II and Level III personnel that performed examinations on Code

Class 1 and 2 welds and components. The inspector also reviewed the licensee's progress toward incorporating ASME, Section XI, Appendix VIII requirements into inservice inspection activities.

b. Observations and Findings

For the nondestructive examination personnel reviewed, the inspector found that personnel had the appropriate levels of certification, experience, and education, and met the visual standards requirements of American Society for Nondestructive Testing SNT-TC-1A. In addition, the inspector confirmed that personnel performing ultrasonic examination and analysis were qualified to Level II and Level III qualification requirements in accordance with paragraphs IWA-2300 and IV-2200 of the Code.

A rule change to 10 CFR 50.55a in 1999 requiring inservice inspection programs to implement selected Supplements to Appendix VIII of Section XI, 1995 Edition with the 1996 Addenda of the ASME Code. Implementation of those Supplements for evaluating electronic characteristics of ultrasonic systems, and qualification requirements for wrought austenitic piping welds, ferritic piping welds, and bolts and studs is required by May 2000. During this inspection, Dresden ISI personnel could not provide a work plan or schedule which demonstrated that required training, procedure implementation and program updates would be completed within the prescribed regulatory deadline.

c. Conclusions

Contractor and licensee personnel performing nondestructive examinations were qualified and certified to regulatory requirements. The licensee's progress towards incorporating Section XI, Appendix VIII supplements into the ISI program, before the required date, was minimal.

M7 Quality Assurance in Maintenance Activities

M7.1 Inservice Inspection Program Implementation

a. Inspection Scope (73753, 73051)

The inspector reviewed the licensee's Inservice Inspection Program Plan and implementation of 10 CFR 50.55a(g) relief request requirements.

b. Observations and Findings

The inspector observed that, in addition to inservice inspection examinations performed during refueling outages, a large number of examinations were also performed during on-line operation and during planned maintenance outages.

Overall, the implementation of the inservice inspection program was found to be consistent with Code and regulatory requirements and the licensee had a clearly defined plan to revise and improve the ISI program. However, during review of the completed second ten year ISI interval, the inspector identified that the inservice ultrasonic

examinations of 13 reactor pressure vessel to nozzle welds, one control rod drive housing weld, one vessel head to flange weld and two safety related support welds had scan limitations recorded on the examination data sheets.

The applicable requirements of the 1977 with Summer 1979 Addenda of ASME Code had not been met for the second ten year ISI interval, in that inspection coverage limitations had not been recorded in the ISI Post-Outage (90 Day) Summary Reports issued to the NRC, and ASME Code relief requests had not been submitted and approved by the NRC for these examinations.

Due to similar issues at other Commonwealth Edison sites, the licensee was internally pursuing corrective actions to resolve this issue for the current ongoing third ten year ISI interval, but had not taken any actions to inform the NRC of this lack of Code and program compliance, or extent of problem, for the previously completed interval. After review of the internal corrective action efforts and associated records for this issue, subsequent examinations during the ongoing third ten year ISI interval were found to have provided sufficient corrective actions for this matter to be considered technically acceptable at this time.

The failure to meet the 1977 ASME Code volumetric examination requirements for 17 Class 1 and 2 welds (U2 - N2G2, -H2, -K2, -J2, 2-THD-FLGE, N20B1, CRD H08; U3-N3C2, -D2, N19A2, -B2, N1B2, N2B2; U2/3-N1B2, M-1163D254, and M-1151D155) during the Dresden second ten year interval is considered a violation of 10 CFR 50.55a(g) requirements. This Severity Level IV violation is being treated as a non-cited violation consistent with section VII.B.1.a of the NRC Enforcement Policy (50-237/249-99017-01). This issue is in the licensee's corrective action program as problem identification form (PIF) D1999-05248.

c. Conclusions

Overall, the implementation of the inservice inspection program was consistent with Code and regulatory requirements. However, a non-cited violation was identified for the failure to meet 10 CFR 50.55a requirements on 17 Class 1 and 2 volumetric examinations performed during the second ten year ISI interval. Sufficient corrective actions were taken for subsequent examinations during the ongoing third ten year ISI interval.

M7.2 Inservice Inspection Program Audits

a. Inspection Scope

The inspector reviewed Quality Assurance Program commitments and the ISI Program audits conducted by the Quality Assurance Nuclear Oversight Department and interviewed licensee personnel.

b. Observations and Findings

Commonwealth Edison's Topical Report CE-1-A committed the licensee's Quality Assurance program to American National Standard N18.7, 1976 Edition. Quality Assurance procedures stated that audits were to be performance based.

The inspector identified that the ISI Program audits completed by the Quality Assurance Nuclear Oversight Department during the last five years did not include actual field observation of nondestructive examinations. Further, ISI personnel reported that they were not aware of any Nuclear Oversight audit observations of safety-related nondestructive examinations performed in the last eight years. As the ISI program basically consisted of a list of scheduled nondestructive examinations, the inspector was concerned that the lack of actual quality assurance field monitoring of ISI nondestructive examination work could undermine the effectiveness of any audits conducted for the ISI Program. In response to the inspector's concern, the licensee issued PIF No. D1999-05249 to address this issue.

c. Conclusions on ISI Program Audits

The lack of actual field observation of nondestructive examinations undermined the effectiveness of quality assurance audits for the inservice inspection program.

III. Engineering

E8 Miscellaneous Engineering Issues

E8.1 (Closed) Violation 50-237/98023-02: Technical Specification violation regarding inservice testing.

Technical Specification 4.0.E.1 required that inservice testing of ASME Code Class 1, 2, and 3 pumps and valves be performed in accordance with the ASME Section XI Code and applicable Addenda as required by 10 CFR 50.55a(f). Two examples were found concerning the containment cooling service water valves and associated pumps where plant surveillance procedures were not adequate to demonstrate that equipment met technical specification requirements. The inspector reviewed associated PIFs (Nos. D1999-01743 and D1999-017510), corrective actions, procedure changes, and design engineering schematics associated with the licensee's resolution of the identified issues.

The inspector verified that the Dresden Inservice Test Surveillance Acceptance Criteria Manual had been revised to document the correct containment cooling service water pump reference values and that the Unit 2 pumps had been re-baselined during the next scheduled pump surveillance. A review of design engineering schematics was performed to ascertain whether flow rates and other values were appropriately determined. Associated procedure DOS 1500-02, "Containment Cooling Service Water Pump Test and Inservice Test", Revision 32, was also reviewed to determine whether the surveillance test criteria had been appropriately revised in an accurate and clearly

understandable manner to ensure that containment cooling service water check valve 2-3999-252 was tested in a manner appropriate with it's safety function.

The inspector found that all corrective actions had been performed in a thorough and accurate manner, and that the licensee had also implemented appropriate corrective actions for similar Unit 3 issues. Therefore, this item is considered closed.

V. Management Meetings

X1 Exit Meeting Summary

The inspector presented the inspection results to members of licensee management at the conclusion of the inspection on December 29, 1999. The licensee acknowledged the findings presented and did not identify any of the potential report input discussed as proprietary.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

J. Almon, Site Vice President, EA
R. Bauman, ISI Programs
T. Broccolo, Independent Assessment Manager
B. Casey, ISI Programs Lead
R. Fisher, Operations Manager
M. Heffley, Dresden Site Vice President
R. Kelly, Regulatory Assurance
W. Staffels, Maintenance Manager
S. Stiles, Assessment Manager
P. Swafford, Station Manager
G. Waldrep, Quality Programs Manager
R. Whalen, Engineering Programs Supervisor

NRC

B. Dickson, Resident Inspector
K. Riemer, Senior Resident Inspector
D. Roth, Resident Inspector

INSPECTION PROCEDURES USED

IP 73753: Inservice Inspection
IP 73052: Review of ISI procedures
IP 73051: Review of ISI program
IP 73755: Review of ISI data

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

50-237/249-99017-01 NCV Failure to meet 50.55a for 17 Class 1 and 2 welds.

Closed

50-237/249-99017-01 NCV Failure to meet 50.55a for 17 Class 1 and 2 welds.
50-237/98023-02 VIO Violation of TS 4.0.E.1 regarding IST

Discussed

None

LIST OF ACRONYMS USED

ASME	American Society of Mechanical Engineers
DRS	Division of Reactor Safety
ISI	Inservice Inspection
NRC	Nuclear Regulatory Commission
PIF	Problem Identification Form

PARTIAL LIST OF DOCUMENTS REVIEWED

Problem Identification Forms

D1998-01738 - "FW Heater Vents Are Degrading Due to FAC", dated 3/13/99
D1998-01831 - "Stellite Cracks Found in Disc Faces on Valve 2-1301-2", dated 3/17/99
D1998-01896 - "Snubber 2-2305-01 Was Found with Anchor Bolts Loose"
D1999-01743 - "DOS 1500-12 Acceptance Criteria Not Met and PIF Not Written", dated 4/15/99
D1999-01751 - "N.O. Identifies Predefine Closed as Done Incorrectly", dated 4/15/99
D1999-04322 - "Shroud Head Bolt Flaws", dated 10/13/99
D1999-05304 - "Performance Demonstrated ISI Nuclear Oversight Audits", dated 12/17/99
D1999-05312 - "ISI Program Code Deviations", dated 12/23/99
D1999-05327 - "NO-38 Clarification of Audit Frequency", dated 12/28/99

Procedures

NDT-Z-1, "ASME Section XI Flaw Evaluation", Revision 2
DOS 1500-02, "Containment Cooling Service Water Pump Test & Inservice Test", Revision 32

Miscellaneous Documents

Work Request Task 980077106-01, "QTR TS CCSW PMP Operability Test & IST Surv", dated 10/22/98
Magnetic Particle Examination Record D006, dated 5/14/99
Ultrasonic Examination Record D007, dated 5/15/99
Dresden Third Ten Year ISI Interval Inservice Inspection Plan, Revision 4

Quality Assurance Documents

ComEd Topical Report CE-1-A
No -38 Nuclear Oversight Master Audit Plan Attachment C - Engineering, Revision 1
NO-AA-11 Nuclear Oversight Continuous Assessment Process, Revision 0
Nuclear Oversight Assessment NOD-CA-98-009-JG, dated 2/25/98
Nuclear Oversight Assessment NOA-12-ES07, dated 5/28/99
Nuclear Oversight Assessment NOA-12-ES09, dated 8/9/99