



Commonwealth Edison

Dresden Nuclear Power Station

R.R. #1

Morris, Illinois 60450

Telephone 815/942-2920

January 5, 1990

EDE LTR #90-005

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Enclosed please find Licensee Event Report #89-031-0, Docket #050237, which involves the addition of three additional test volumes into the Dresden Station Type 'B' and 'C' Primary Containment Local Leak Rate Testing (LLRT) Program. Although it was concluded that addition of these previously untested volumes into the LLRT program did not meet 10CFR 50.72 or 10CFR 50.73 reporting criteria, this report is submitted on a voluntary basis in accordance with NUREG 1022 due to the generic applicability of this topic.

E. D. Eenigenburg
Station Manager
Dresden Nuclear Power Station

EDE/jmt

Enclosure

cc: A. Bert Davis, Regional Administrator, NRC Region III
File/NRC
File/Numerical

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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1) Dresden Nuclear Power Station, Unit 2/3 Docket Number (2) 0 5 10 10 10 12 13 17 Page (3) 1 of 0 4

Title (4) Additional Volumes Added to Type B and C Local Leak Rate Testing Program Due to Self-Assessment Initiative

Event Date (5)			LER Number (6)			Report Date (7)			Other Facilities Involved (8)							
Month	Day	Year	Year	Sequential Number	Revision Number	Month	Day	Year	Facility Names	Docket Number(s)						
1	2	08	8	9	0	3	1	0	10	15	10	10	10	12	14	19

OPERATING MODE (9) N

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)

20.402(b)	20.405(a)(1)(i)	20.405(a)(1)(ii)	20.405(a)(1)(iii)	20.405(a)(1)(iv)	20.405(a)(1)(v)	20.405(c)	50.73(a)(2)(i)	50.73(a)(2)(ii)	50.73(a)(2)(iii)	50.73(a)(2)(iv)	50.73(a)(2)(v)	50.73(a)(2)(vii)	50.73(a)(2)(viii)(A)	50.73(a)(2)(viii)(B)	50.73(a)(2)(x)	73.71(b)	73.71(c)	<input checked="" type="checkbox"/> Other (Specify in Abstract below and in Text)
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POWER LEVEL (10) 0 9 5

LICENSEE CONTACT FOR THIS LER (12)

Name M. Horbaczewski, Technical Staff Group Leader Ext. 2461

TELEPHONE NUMBER AREA CODE 8 1 5 9 4 2 -12 19 12 10

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

Expected Submission Date (15) X NO

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

At 1130 hours on December 8, 1989, with Unit 2 at 95% power and Unit 3 in a refuel outage, completion of a primary containment Type B and C local leak rate testing (LLRT) improvement assessment concluded that three previously untested volumes should be added to the LLRT program. These test volumes included service air and clean demineralized water penetrations to the primary containment drywell, and various small drywell air sampling penetrations. Corrective actions included addition of these volumes into the LLRT program, and scheduling performance of LLRTs of these volumes on Units 2 and 3. Safety significance was minimal because these penetrations are normally isolated with closed manual valves and have demonstrated satisfactory integrity during performance of primary containment integrated leak rate tests, during which the drywell is pressurized with air to post accident design conditions. This was the first occurrence of this type.

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TEXT Energy Industry Identification System (EIIS) codes are identified in the text as [XX]

PLANT AND SYSTEM IDENTIFICATION:

General Electric - Boiling Water Reactor (BWR) - 2527 Mwt rated core thermal power.

Nuclear Tracking System (NTS) tracking code numbers are identified in the text as (XXX-XXX-XX-XXXXX).

EVENT IDENTIFICATION:

Additional Volumes Added to Type B and C Local Leak Rate Testing Program Due to Self-Assessment Initiative

A. CONDITIONS PRIOR TO EVENT:

Unit(s): 2(3) Event Date(s): December 8, 1989 Event Time: 1130 hours

Reactor Mode(s): N (N) Mode Name(s): Run (Refuel) Power Level(s): 95% (0%)

Reactor Coolant System (RCS) Pressure(s): 993 (0) psig

B. DESCRIPTION OF EVENT:

At 1130 hours on December 8, 1989, with Unit 2 at 95% power and Unit 3 in a refuel outage, a primary containment Type B and C local leak rate testing (LLRT) improvement assessment review was concluded. As part of a 1989 corporate goal, the general office Station Support Services staff had initiated a detailed review of all the Commonwealth Edison BWR plant LLRT programs. This project consisted of three primary steps.

1. Compilation of a summary of each plant's 10CFR50 Appendix J commitments and policies.
2. Compilation of physical data on containment isolation valves [JM], penetrations and pathways.
3. Review of each containment pathway, utilizing the above information to document all testing requirements along with their regulatory and technical basis.

After a review of the Quad Cities Station (a Commonwealth Edison BWR site of similar vintage) LLRT program, seven groups of untested pathways were identified. A review of Dresden's program revealed that three of these pathways were not currently being tested. The systems involved are listed below.

1. Primary Containment Drywell Service Air [LF] Valve 2(3)-4609-501 (one inch line normally manually isolated)
2. Primary Containment Drywell Clean Demineralized Water [KC] Valve 2(3)-4327-500 (three inch line normally manually isolated)
3. Drywell Air Sampling Valves 2(3)-2252-47-1 through 2252-47-24 (1/2 inch lines normally manually isolated)

The Dresden Units 2 and 3 Technical Specifications require compliance with 10CFR 50 Appendix J, Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors, which sets forth primary containment leakage test standards. These test requirements provide for verification of the leak-tight integrity of the primary reactor containment, and systems and components which penetrate the primary containment. "Type C Tests" means LLRTs intended to measure containment isolation valve leakage rates. The containment isolation valves included in the Type C LLRT requirements are those that:

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1. Provide a direct connection between the inside and outside atmospheres of the primary containment under normal operation, such as purge and ventilation [BD], vacuum relief [BF], and instrument valves;
2. Are required to close automatically upon receipt of a containment isolation signal in response to controls intended to effect containment isolation;
3. Are required to operate intermittently under postulated post accident conditions; and
4. Are in main steam [SB] and feedwater [SJ] piping and other systems which penetrate the primary containment.

Because the three previously untested systems do not meet the 10CFR50 Appendix J Type C testing requirements listed above, this event is not considered a deficiency in the Dresden LLRT program. However, LLRTs of these systems were initiated as an enhancement to the program.

C. APPARENT CAUSE OF EVENT:

This event did not involve component failure, nor any condition requiring reporting under 10CFR 50.72 or 10CFR 50.73. This enhancement to the Type B and C LLRT program was initiated by a systematic self-assessment program, which included comparison of these penetration configurations with those of more recently licensed sites. It is believed that these penetration configurations met the licensing requirements at the time of original construction, as well as the 10CFR50 Appendix J requirements, and as such they did not require LLRTs. The root cause for the difference in these penetration configurations in comparison with newer plants is that licensing and design criteria have changed significantly since the time of original plant licensing.

D. SAFETY ANALYSIS OF EVENT:

The primary containment drywell service air and clean demineralized water penetrations are normally isolated with closed manual valves under power operation. The drywell air sampling lines are also normally isolated with manual valves except when in use by Radiation Protection Technicians to collect containment atmosphere samples by valving in closed sample cartridges. All of these previously untested volumes are challenged during performance of primary containment integrated leak rate testing (ILRT), which involves pressurizing the primary containment to design basis accident conditions; Dresden Units 2 and 3 have demonstrated excellent ILRT results. The only ILRT failure within the last ten years involved an unrelated failure of pressure suppression chamber vacuum breaker shaft seal packing. For these reasons, the safety significance of this event was minimal.

E. CORRECTIVE ACTIONS:

The Technical Staff LLRT engineer will revise Dresden Technical Staff Surveillance (DTS) 1600-14, LLRT of Primary Containment Isolation Valves, to include the three previously untested volumes (237-200-89-18601). Dresden Administrative Procedure (DAP) 14-5, LLRT Program, will also be revised to require accounting of these new LLRT volumes in the Type B and C LLRT data bases (237-200-89-18602). These volumes were also tested during a December, 1989 Unit 2 scheduled outage with no significant leakage observed; LLRTs of these volumes will also be performed on Unit 3 prior to startup from the current refuel outage (237-200-89-18603).

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TEXT Energy Industry Identification System (EIIS) codes are identified in the text as [XX]

F. PREVIOUS EVENTS:

None.

G. COMPONENT FAILURE DATA:

As no component failures were involved, this section is not applicable.