NRC FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Dresden Nuclear Power Station, Unit 2	05000237	1 of 6

TITLE (4)
Primary Containment Electrical Penetrations Never Subjected to Type B Local Leak Rate Test Due to Break Down of the Modification Process

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 NAME	DOCKET NUMBER
01	09	97	97	-- 001 --	01	04	11	97	Dresden Unit 3	05000249
									FACILITY NAME	DOCKET NUMBER

		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)					
OPERATING MODE (9)	N	20.2201(b)	20.2203(a)(3)(i)	50.73(a)(2)(iii)	73.71(b)		
POWER LEVEL (10)	100	20.2203(a)(1)	20.2203(a)(3)(ii)	50.73(a)(2)(iv)	73.71(c)		
		20.2203(a)(2)(i)	20.2203(a)(4)	50.73(a)(2)(v)	OTHER		
		20.2203(a)(2)(ii)	50.36(c)(1)	50.73(a)(2)(vii)	(Specify in Abstract below and in Text, NRC Form 366A)		
		20.2203(a)(2)(iii)	50.36(c)(2)	50.73(a)(2)(viii)(A)			
		20.2203(a)(2)(iv)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(B)			
		20.2203(a)(2)(v)	50.73(a)(2)(ii)	50.73(a)(2)(x)			

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
D. Oakley, Local Leak Rate Engineer Ext. 3708	(815) 942-2920

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)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

At approximately 1300, on January 09, 1997, with Unit 2 operating at 100% power and Unit 3 shutdown for Forced Outage D3F23, a review of the UFSAR and Conax Buffalo electrical penetration assembly vendor manuals determined that there were two Primary Containment boundaries on Unit 2 and two boundaries on Unit 3 which had never been challenged by a Type B Local Leak Rate Test (LLRT). The cause for the omission of these four electrical penetrations from the LLRT program and its associated testing was due to a breakdown in the Modification process. Revisions were made to the applicable Primary Containment Leakage Rate Testing Program procedures to include these electrical penetrations as testable containment barriers and the LLRT basis will be updated. Upon completion of procedure revisions, these four electrical penetrations were each given a Type B LLRT. Containment integrity has been intact as demonstrated by successful ILRTs performed at the end of numerous ILRT refuel outages. The safety significance concerning the omission of testing for these four electrical penetrations was minimal.

PLANT AND SYSTEM IDENTIFICATION

General Electric - boiling water reactor - 2527 MWt rated core thermal power.

Energy Industry Identification System (EIIS) codes are identified in the text as [XX] and are obtained from IEEE Standard 805-1984, IEEE Recommendation Practice for System Identification in Nuclear Power Plants and Related Facilities.

EVENT IDENTIFICATION:

Primary Containment Electrical Penetrations Never Subjected to Type B Local Leak Rate Test Due to Break Down of the Modification Process

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: 2(3) Event Date: 01/09/97 Event Time: 1300 hrs

Reactor Mode: N(N) Mode Name: Run(Refuel) Power Level: 100(0)

Reactor Coolant System Pressure: 1005 psig (0 psig)

B. DESCRIPTION OF EVENT:

This LER is being submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) which requires the reporting of any operation or condition prohibited by the plant's Technical Specifications.

At approximately 1300, on January 09, 1997, with Unit 2 operating at 100% power and Unit 3 shutdown for Forced Outage D3F23, a review of the UFSAR and Conax Buffalo electrical (Conax) penetration assembly vendor manuals by the Local Leak Rate Test (LLRT) Program Engineer (non-licensed) determined that there were two Primary Containment [JM] boundaries on Unit 2 and two boundaries on Unit 3 which had never been challenged by a Type B LLRT. These Conax penetrations occupy one of four positions associated with primary containment [JM] penetrations X-316A and X-316B, located on the torus catwalk.

The Operating Department Shift Manager (Licensed Senior Reactor Operator (SRO)) was notified by a Performance Improvement Form (PIF) and an Operability Determination, issue/concern screening form was completed. The evaluation determined that the containment was operable, however, a potential concern exists because the Conax penetrations had not been tested. Reasonable assurance that containment integrity was intact was due to the fact that both Unit 2 and Unit 3 passed as-left ILRTs during their last refuel outage. In addition, the inerted containment nitrogen make-up flow rate was not excessive; an indication that there was no breach of primary containment.

Revisions were made to the LLRT program to include these four Conax penetrations as testable containment barriers. Upon completion of procedure revisions, the four Conax penetrations were each given a Type B LLRT. Each of these LLRTs indicated no leakage through the Conax penetrations. Subsequent completion of the primary containment operability evaluation determined that the concern no longer existed because the successful LLRTs demonstrated that containment is intact and containment leakage is below Technical Specification/Appendix J leakage limits.

ComEd's review indicates that the subject Conax penetrations were installed during modifications M12-2-75-43, for Unit 2, and M12-3-75-33, for Unit 3, completed by March 3, 1983. The modification documentation does indicate that the Conax penetrations be capable of periodic leak rate testing but does not include instructions to enter the Conax penetrations into the LLRT program. Additionally, the modification process in place at that time did not specifically address containment isolation relevancy with respect to the plant design change. Thus, the modification program did not prompt the cognitive engineer to review and include the Conax penetrations into the LLRT program. In December of 1986, Dresden Administrative Procedure (DAP) 05-01, Plant Modification Program, was revised to include a checklist item determining if the modification affects any LLRT volumes. This item remained in DAP 05-01 through 1995. The current modification process, controlled by Dresden Administrative Procedure (DAP) 21-03, Processing Plant Design Changes, directs the user to Nuclear Engineering Procedure (NEP) 04-05, which includes (revision 0, dated January 3, 1995) the design change acceptance testing checklist which specifically addresses containment isolation relevancy with respect to the plant design change.

The previous two LLRT Coordinators were aware of the Conax penetrations, but believed that they were not testable. The LLRT Coordinator's believed that known penetrations had at some point in time been reviewed to determine if testing was required. Thus, known penetrations which were not already in the LLRT program were assumed not to require an LLRT. Only newly identified penetrations/ issues were reviewed to determine if they required an LLRT or a change in methodology. During the period of 1992 through 1996, there were numerous instances where penetrations should have been tested yet were not, or penetrations were not properly tested. In response to these events, walkdowns of penetrations and reviews of testing methodology were performed. However, these walkdowns and reviews focused on the specific type of penetration or testing issue that was identified at that time and did not have sufficient scope to classify the Conax penetrations identified in this event.

In light of the trend of missed or improperly tested penetrations (see section F), a complete walkdown of all containment penetrations will be performed. The results of the walkdown will include identifying why a penetration is or is not included in the LLRT program. This action would provide an additional opportunity to assure, and document that testing is being properly performed. It should be noted that the overall leakage from containment has been trending down the last two fuel cycles for each unit. The Station is confident that the current scope of the LLRT program is meeting the Appendix J requirements, but the complete walkdown and documentation of the walkdown is the conservative approach to address the missed or improperly tested penetration trend.

No other system or component inoperabilities have been identified which contributed to the event. In addition, no manual or automatic engineered safety feature (ESF) actuation occurred as a result of this event.

C. CAUSE OF EVENT:

The root cause of this event is a breakdown in the modification process (NRC cause code B). The modification process in place at the time the penetrations were added did not specifically address containment isolation relevancy with respect to the plant design change.

A contributing cause of this event involves a management deficiency (NRC cause code E). The limited scope of previous containment penetrations walkdowns resulted in the Conax penetrations not being identified sooner.

D. SAFETY ANALYSIS:

The safety significance concerning the omission of testing for these four electrical penetrations was minimal, since these electric penetration assemblies each indicated no leakage when challenged by Type B LLRTs. If these penetrations had been leaking excessively, there could have been a negative impact on the overall dose rate to Control Room personnel and the public.

However, if these penetrations had been leaking an excessive amount, the ILRT would have identified the leakage along with an excessive nitrogen makeup during Unit operation. Containment integrity has been intact as proven by successful ILRTs performed at the end of numerous ILRT refuel outages. In addition, Secondary Containment provides a barrier for leakage past the Primary Containment.

Based on the above, the overall safety significance of this event is minimal.

E. CORRECTIVE ACTIONS:

1. Dresden Technical Procedure (DTP) 47, Leak Rate Testing Program, and Dresden Technical Surveillance (DTS) 1600-04, Local Leak Rate Testing of Electrical Penetrations, were revised to include these four Conax electrical penetrations as testable containment barriers. (Complete)

2. The four electrical penetrations were leak tested using a Type B LLRT. Each of these LLRTs yielded a leakage rate of 0 scfh. (Complete)

3. The current modification process, controlled by DAP 21-03, directs the user to NEP 04-05, which includes (revision 0, dated January 3, 1995) the design change acceptance testing checklist which specifically addresses containment isolation relevancy with respect to the plant design change. Prior to this, DAP 05-01 was revised in December 1986 to include a checklist item determining if the modification affects any LLRT volumes. (Complete)

4. A walkdown was performed of Conax Buffalo electrical penetration assemblies and they were verified to be part of the Primary Containment Leakage Rate Testing Program. (Complete)

5. All Primary Containment penetrations will be reviewed to re-verify and document testing requirements are being met whether they are designated testable or non-testable. All results will be independently verified. (2371809700101AS1 for Unit 3 & 2371809700101BS1 for Unit 2)

6. The basis for the LLRT program will be revised, based on the results of action 2371809700101AS1 & 01BS1 to document which volumes/penetrations are testable or non-testable and document why testing is/ is not required. The UFSAR and primary containment design basis document will be updated as appropriate. (2371809700102AS1 for Unit 3 & 2371809700102BS1 for Unit 2)

F. PRIOR SIMILAR OCCURRENCES:

LER/Docket Numbers	Title
95-020/0500237	Primary Containment Boundaries Not Type B Tested Due to Management Deficiency

In this event, the practice of reverse testing of some volumes resulted in deficient tests. Corrective actions included a review of all volumes for proper testing that were in the LLRT program. This corrective action would not have been effective in preventing this event because the subject penetrations were not in the LLRT program and thus were not reviewed.

94-002/0500249	Process Line Primary Containment Isolation Valves Never Subjected to Type C Local Leak Rate Test due to Management Deficiency

In this event, a previously unidentified penetration was identified. Corrective actions included a walkdown of containment, looking for any other unidentified penetrations. This action would not have been effective in preventing this event because the penetration was known to the LLRT Coordinators and they believed that it had already be properly dispositioned as not requiring testing.

94-001/0500237	Process Line Primary Containment Isolation Valves Never Subjected to Type C Local Leak Rate Test due to Management Deficiency

In this event, a previously unidentified penetration was identified. Corrective actions included a walkdown of containment, looking for any other unidentified penetrations. This action would not have been effective in preventing this event because the penetration was known to the LLRT Coordinators and they believed that it had already be properly dispositioned as not requiring testing.

92-016/0500237 Unchallenged Primary Containment Boundary Due to Management Deficiency

In this event, it was identified that the Containment Atmosphere Monitoring system had not been properly tested. Corrective actions included a review of all containment penetrations for type C testing. This action would not have been effective in preventing this event, because the Conax penetrations require type B testing.

G. COMPONENT FAILURE DATA:

There was no component failure.