



Commonwealth Edison

Dresden Nuclear Power Station

R.R. #1

Morris, Illinois 60450

Telephone 815/942-2920

June 29, 1989

EDE LTR #89-518

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

Licensee Event Report #89-007-0, Docket #050249 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10 CFR 50.73(a)(2)(i)(B).

E.D. Eenigenburg
Station Manager
Dresden Nuclear Power Station

EDE/ade

Enclosure

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

(0604k)

8907050308 890629
PDR ADOCK 05000249
S PDC

JE22
11

Form Rev 2.0

On May 31, 1989, at 1025 hours, with Unit 3 operating at 21% rated core thermal power, increasing to full power following a scheduled maintenance outage, it was discovered during the performance of Dresden Technical Surveillance (DTS) 1600-14, Local Leak Rate Testing of Personnel Access Lock, that the personnel access airlock had leakage in excess of 3.75% of the total allowable Primary Containment leakage (La) of 821.86 standard cubic feet per hour (scfh). The personnel access airlock outer door was immediately inspected, however no leakage was observed. Therefore, the leakage was being experienced by the inner door. In order to inspect the inner door of the personnel access airlock the reactor had to be shutdown and Primary Containment deinerted. Investigation of the inner door seal revealed a six inch tear in the gasket. The root cause was determined to be a result of an improperly seated gasket being pinched between the personnel access airlock door and frame. The gasket was replaced under Work Request 85221 and the "as left" LLRT indicated a leakage of 13.9 scfm. This is well within the Technical Specification 3.7.A.2.(b)(2)(b) limit of 30.82 scfh for any one personnel access airlock. To prevent recurrence a procedure revision to Dresden Operating Surveillance (DOS) 1600-10, Pre-Startup Drywell Inspection Plan, will be submitted requiring a thorough inspection of the door seals prior to final closing of the personnel access airlock. A previous occurrence of exceeding the leak rate limit is documented in Licensee Event Report 88-018 on Docket 050237.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)						Page (3)		
		Year		Sequential Number		Revision Number				
Dresden Nuclear Power Station	0 5 0 0 0 2 4 9	8 9	-	0 0 7	-	0 0	0 2	OF	0 3	
TEXT	Energy Industry Identification System (EIIS) codes are identified in the text as [XX]									

PLANT AND SYSTEM IDENTIFICATION:

General Electric - Boiling Water Reactor - 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:

The Primary Containment (NH) Personnel Access Airlock was Discovered to Have a Leakage in Excess of 3.75% of the Total Allowable Primary Containment Leakage (La) Due to an Improperly Seated Gasket.

A. CONDITIONS PRIOR TO EVENT:

Unit: 3

Event: May 31, 1989

Event Time: 1025 Hours

Reactor Mode: N

Mode Name: Run

Power Level: 21%

Reactor Coolant System (RCS) Pressure: 944 psig

B. DESCRIPTION OF EVENT:

At 1025 hours on May 31, 1989, with Unit 3 operating at 21% rated core thermal power, increasing to full power following a scheduled maintenance outage, it was discovered during the performance of Dresden Technical Surveillance (DTS) 1600-14, Local Leak Rate Testing of Personnel Access Lock, that the personnel access airlock had a leakage in excess of 3.75% of the total allowable Primary Containment leakage (La) of 821.86 standard cubic feet per hour (scfh). While performing DTS 1600-14, the personnel access airlock was pressurized to the calculated peak containment internal pressure (Pa), related to the design basis accident, of 48 psig. This pressure was maintained for approximately two minutes when a sudden depressurization was experienced. The volume pressure decreased from 48 psig to 30 psig in approximately 10 seconds. The personnel access airlock outer door was immediately inspected, however no leakage was discovered.

It was determined that the leakage was occurring through the inner door of personnel access airlock. The personnel access airlock outer door could not be opened until the Primary Containment was in a deinerted condition. The reactor was shutdown and the mode switch placed in refuel. Following deinerting of the Primary Containment the personnel access airlock was inspected and it was discovered that the inner door seal had a six inch tear.

C. APPARENT CAUSE OF EVENT:

This report is submitted in accordance with 10CFR50.73(a)(2)(i)(B), which requires the reporting of any operation or condition prohibited by the plant's Technical Specifications. Investigation by the Technical Staff and Mechanical Maintenance Department personnel revealed that the inner door seal experienced a six inch longitudinal tear. Discussions with the individuals responsible for securing the personnel access airlock prior to Unit startup revealed that the gasket seal would not stay evenly seated in the gasket groove. Prior to securing the personnel access airlock inner door the gasket seal was successfully reseated; however, it is believed that the gasket seal was pinched during previous openings and closing of the personnel access airlock during the course of the short maintenance outage. If the gasket seal is not seated evenly in the gasket groove, the potential exists to pinch the gasket between the personnel access airlock door and frame. This is believed to be the root cause of this event.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (3)										Page (3)		
		Year	///	Sequential Number			///	Revision Number						
Dresden Nuclear Power Station	0 5 0 0 0 2 4 9	8 9	-	0 0 7	-	0 0					0 3	OF	0 3	

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

D. SAFETY ANALYSIS OF EVENT:

The safety significance is considered minimal since the outer door of the personnel access airlock was not leaking. Additionally, the subsequent Local Leak Rate Test of the personnel access airlock, following the gasket repair, indicated a total leakage of 13.9 SCFH. Therefore, the maximum pathway through-leakage of the personnel access airlock, subsequent to the gasket being pinched, was 13.9 SCFH or 1.69 percent of La. This is well within the Technical Specification 3.7.A.2.(b)(2)(b) limit of 3.75% of La.

E. CORRECTIVE ACTIONS:

The personnel access airlock inner door gasket seal was replaced under the direction of Work Request 85164. DTS 1600-14 was performed and the measured leakage was found acceptable at 13.9 scfh. In order to prevent recurrence a revision will be made to Dresden Operating Surveillance (DOS) 1600-10, Pre-Startup Drywell Inspection Plan, to include a detailed inspection checklist (249-200-89-04801). This will ensure the personnel access airlock door gasket seals are properly seated prior to the final closing. Additionally the access airlock gasket seal will be added to the Preventive Maintenance Program requiring the gasket to be replaced every refueling outage (249-200-89-08802).

F. PREVIOUS OCCURRENCES:

LER/Docket Number Title

88-018/050237 Leak Rate Limits Exceeded in Drywell Head Seal and MSIV 2-203-1D Tests Due to Misalignment and Seat Wear.

During this event the drywell head seal was discovered to have an "as found" leak rate of 491.37 scfh. The apparent cause of the excessive drywell head seal was attributed to improper seating. The gasket was replaced and the "as left" leakage was .0914 SCFH. To prevent recurrence Dresden Maintenance Procedure (DMP) 1600-5, Drywell Head Replacement and Installation of Shield Blocks, has been revised to insure that the gasket is properly inserted in the groove prior to the drywell head installation.

G. COMPONENT FAILURE DATA:

The personnel access airlock door seals are manufactured from a Garlock 8364 material. A search of the NPRDS data base revealed no reported failures of seals utilizing the Garlock 8364 material. During this event the personnel access airlock door seal did not fail as a result of seal degradation, but rather due to improper seating within the gasket groove and subsequent pinching of the gasket.