



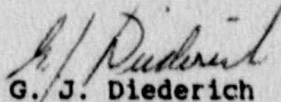
Commonwealth Edison
LaSalle County Nuclear Station
Rural Route #1, Box 220
Marseilles, Illinois 61341
Telephone 815/357-6761

September 25, 1990

Director of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D.C. 20555

Dear Sir:

Licensee Event Report #90-004-01, Docket #050-374 is being submitted to your office to supercede previously submitted Licensee Event Report 90-004-00. This report gives details of Local Leak Rate Test Failures from LaSalle Unit 2 third refuel outage.


G. J. Diederich
Station Manager
LaSalle County Station

GJD/DML/lis

Enclosure

xc: Nuclear Licensing Administrator
NRC Resident Inspector
NRC Region III Administrator
INPO - Records Center

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor

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A. CONDITION PRIOR TO EVENT

Unit(s): 2 Event Date: 3/20/90 Event Time: 0800 Hours

Reactor Mode(s): 5 Mode(s) Name: Refuel Power Level(s): 0%

B. DESCRIPTION OF EVENT

On March 20, 1990, while Unit 2 was in Operational Condition 5 (Refuel), for its third refueling outage, LaSalle Technical Surveillance LTS-100-19, "Reactor Water Cleanup Suction Local Leak Rate Test," had been performed on the 2G33-F001 and 2G33-F004 (RT) [CE] valves. These valves are the Reactor Water Cleanup Suction Containment Isolation valves. A minimum-pathway leakage of greater than 231.4 SCFH was observed which exceeded the 0.6 La limits per 10CFR50 Appendix J and Technical Specification 3.6.1.2, Primary Containment Integrity (PC) [NH].

This report is being submitted to discuss the mode of failure of the subject Reactor Water Clean-up Suction valves. In addition, Table 1 is provided to summarize all other Leakrate failures (10CFR50 Appendix J, Main Steam Line (MS) [SB] valves and the "As-found," Primary Containment Integrated Leakrate Test (PC) [NH]) which occurred during the Unit 2 refueling outage.

C. APPARENT CAUSE OF EVENT

Refer to Table 1 for the cause of each Local Leakrate failure encountered during the Unit 2, third refueling outage.

Refer to Table 1 for the cause of failure of the "As-Found," Type-A PCILRT (Primary Containment Integrated Leakrate Test) during Unit 2, third refueling outage. The total "As-Found," Type-A Containment leakage was found to be Indeterminate which is in excess of 0.75 La (0.476 wt%/day), acceptance criterion. This Indeterminate leakage is due solely to Type-C, minimum-pathway Leakage (Calculated Adjustment) summation failure.

D. SAFETY ANALYSIS OF EVENT

Exceeding this limit did not by itself pose any significant risks or hazards to the public since the total leakage determined by Type B and C tests does not definitively represent the probable leakage from the Containment under accident conditions.

The worst case (maximum-pathway) total leakage path calculation is still not a true measure of expected leakage during accident conditions. For example, a number of Type C tests are performed on systems which would, under most accident scenarios, be filled with water and pressurized. These valves, while they may represent a substantial portion of the total measured leakage for Type B and C testing, would contribute nothing to a radiological release under most accident conditions.

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E. CORRECTIVE ACTIONS

Refer to Table 1 for the "Short term" corrective actions taken during the Unit 2, third Refuel outage for each of the LLRT failures and LLRT values above LaSalle Station's Administrative Limits and also the PCILRT, "As-Found," failure during the Unit 2, third refueling outage.

LaSalle Station has performed a review of recent local leak rate test history and has identified 3 primary containment penetrations which have exhibited repetitive local leak rate test failures. These penetrations and LaSalle's program for minimizing leakage through the subject penetrations are summarized below:

Reactor Water Cleanup (RWCU) Suction Isolation Valves

An Engineering investigation will be conducted regarding possible replacement or modification programs for the RWCU Suction Line Isolation Valves, 1(2)G33-F001 and 1(2)G33-F004. The final replacement and/or modification program chosen will ensure minimum leakage through these valves. (AIR-373-100-90-01203.1 will track the completion of the Engineering investigation and follow up corrective actions).

Main Steam Line Outboard Drain Isolation Valves

An Engineering investigation similar to the investigation for the RWCU Suction Line Isolation Valves will be conducted for the Main Steam Line Outboard Drain Isolation Valves 1(2)B21-F067A/B/C/D. (AIR 373-100-90-01203.2 will track the completion of the Engineering investigation and follow up corrective actions).

Drywell Floor and Equipment Drain Sump Isolation Valves

LaSalle Station has determined the cause of the repetitive leak rate failures of these valves to be foreign objects or materials getting caught in the valves. These objects and materials enter the Drywell Floor and Equipment Drain Systems through the sumps inside the Drywell. LaSalle Station is investigating the use of filtering screens to be placed in the Drywell Sumps during extended (refuel) outages. In addition, LaSalle Station is considering periodic inspection and cleaning of the Drywell Sumps during extended outages. It is expected that placing the temporary screens in the Drywell Sumps will prevent foreign objects from being caught in the Drywell Equipment and Floor Drain System Isolation Valves. (AIR-373-100-90-01203.3 will track the completion of the Drywell Sump screening, inspection, and cleaning program).

F. PREVIOUS EVENTS

LER Number	Title
83-107/31-0	Numerous Containment Isolation Valves Exceeding Allowable Leakage
83-146/03X-1	Inboard Feedwater Check Valves Failed Local Leak Rate Tests
373/84-012-00	Feedwater Checks and Drywell Equipment Drains Failed Local Leak Rate Tests
373/84-064-01	1B21-F010A/32A and 1E51-F064 Failed Local Leak Rate Tests
373/85-066-01	Containment Isolation Valve Failed Local Leak Rate Test
374/87-002-01	Containment Leakage Limit Exceeded
373/88-002-01	Type B and C Total Leakage Exceeded 0.6 La During Local Leak Rate Testing
374/88-014-01	Type B and C Total Leakage Exceeded 0.6 La During Local Leak Rate Testing

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G. COMPONENT FAILURE DATA

Manufacturer	Nomenclature	Model Number
Anchor Darling	2G33-F001/4 (MOV) 4" - Gate Valve	94-13753(4)
Anchor Darling	2B21-F010A 24" - Testable Check Valve	3600-3
WKM Div/ACF Ind. Inc.	2RF012/13 (AOV) 2" - Gate Valve	70-29-1
Anchor Darling	2VP053A (MOV) 8" - Gate Valve	93-14412
Anchor Darling	2HG006A (MOV) 6" - Gate Valve	93-14409
Rockwell Mfg. Co.	2E12-F053A (MOV) 12" - Globe Valve	4016MTY
Clow	2VQ026 (ADV) 26" - Butterfly Valve	84-2842-01 (N)
Anchor Darling	2B21-F019 (MOV) 3" - Gate Valve	94-13750
Anderson Greenwood	2B21-F067A/C/D (MOV) 1-1/2" - Globe Valve	94-0059
Rockwell	2E51-F069 (MOV) 1-1/4" - Globe Valve	1.25-3624
Rockwell	2E51-F091 (MOV) 1" - Globe Valve	36/24MT1
Anchor Darling	2E51-F008 (MOV) 4" - Gate Valve	93-14401
WKM Div/ACF Ind. Inc.	21N074/75 (ADV) 1-1/2" - Globe Valve	70-29-1

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TABLE 1

SUMMARY OF CONTAINMENT ISOLATION VALVES WITH EXCESSIVE LEAKAGE

PENET. VALVE(S)	SYSTEM	AS-FOUND (SCFH)	AS-LEFT (SCFH)	CAUSE/CORRECTIVE ACTION
M-30 2G33-F001 2G33-F004	RT[CE]	Indeterminate Indeterminate	3.31 4.19	Incomplete seating surfaces on both valves. Packing leak on 2G33-F001 valve. Repacked 2G33-F001 valve. Lapped seat, disc, and cleaned off off seating surfaces of both valves.
M-5 2B21-F010A	FW[SJ]	Indeterminate	4.73	Incomplete seating surface. Cleaned out all valve seating surfaces. Rotated hinge pins to seat disc.
M-98 2RF012 2RF013	RF[WK]	225.5	4.86	Incomplete seating surfaces on both valves. Installed new bonnet, gasket and new seat ring for each valve. Cleaned seating surfaces of both valves.
M-27 2VP053A	VP[VB]	Indeterminate	16.66	Incomplete seating surface. Cleaned out seating surface. Lapped valve seat and disc surfaces.
M-104 2HG006A	HG[BB]	111.0	1.0	Incomplete seating surface. Lapped, cleaned disc and seating surfaces.
M-9 2E12-F053B	RH[BO]	65.7	2.42	Valve not closing far enough. MOV refurbishment of operator.
M-66 2VQ026	PC[JH]	20.42	11.6	Leakage caused from dirt on seating surface. Cleaned and polished seating surface.
M-22 2B21-F019	MS[SB]	18.5	5.55	Incomplete seating surface. Cleaned out all seating surfaces. Lapped valve disc.
M-1 2B21-F067A	MS[SB]	198.7	0.0	Seating surface of valve steam cut. Disassembled valve, lapped and cleaned seating surface.
M-3 2B21-F067C	MS[SB]	239.0	2.36	Valve seating surface steam cut. Lapped and cleaned seating surface.
M-4 2B21-F067D	MS[SB]	106.76	1.11	Seating surface of valve steam cut. Lapped and cleaned seating surface.
M-81 2E51-F069	RI[BN]	4.68	0.84	Dirty seating surfaces. Cycled at pressure. MOV refurbishment of operator.
M-15 2E51-F091 2E51-F008	RI[BN]	Indeterminate	1.02	2E51-F008 had excessive packing, leakage. 2E51-F091 had leakage past seat. Replaced packing on 2E51-F008. Cleaned and lapped seat on 2E51-F091.

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TABLE 1

SUMMARY OF CONTAINMENT ISOLATION VALVES WITH EXCESSIVE LEAKAGE

PENET. VALVE(S)	SYSTEM	AS-FOUND (SCFH)	AS-LEFT (SCFH)	CAUSE/CORRECTIVE ACTION
M-54 21N074 21N075	IN[LE]	42.1	1.39	Incomplete seating surfaces on both valves. Cleaned all internal seating surfaces for both valves. Installed new valve plug and repacked both valves.