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DUKE POWER

DATE: April 11, 1997

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

Subject: McGuire Nuclear Station, Unit 1 and 2
Docket No. 50-369
Licensee Event Report 369/97-02, Revision 0
Problem Investigation Process No.: 1-M97-0747 and 2-M97-1041

Gentlemen:

Pursuant to 10 CFR 50.73 Sections (a) (1) and (d), attached is Licensee Event Report 369/97-02, Revision 0, regarding Inoperability of Unit 1 and 2 Feedwater Isolation Valves. This report is being submitted in accordance with 10 CFR 50.73 (a) (2) (ii) and (v). This event is considered to be of no significance with respect to the health and safety of the public.

Very truly yours,

H. B. Barron

JWP/bcb

Attachment

cc: Mr. L. A. Reyes
Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta St., NW, Suite 2900
Atlanta, GA 30323

INPO Records Center
Suite 1500
1100 Circle 75 Parkway
Atlanta, GA 30339

Mr. Victor Nerses
U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, D.C. 20555

Mr. Scott Shaeffer
NRC Resident Inspector
McGuire Nuclear Station

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P. M. Abraham (EC08I)
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D. A. Harton (EC05N)
NSRB Support Staff (EC05N)

LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), 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.

FACILITY NAME (1)

McGuire Nuclear Station, Unit 1

DOCKET NUMBER (2)

05000369

PAGE (3)

1 of 1

TITLE (4)

Inoperability of Feedwater Isolation Valves Due To Hydraulic Oil Degradation

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(S)
3	13	97	97	- 02	- 0	4	11	97	Unit 2	05000370
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR (Check one or more of the following) (11)							
1			20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)	
POWER LEVEL (10)			20.405(a)(1)(i)		50.36(c)(1)		X 50.73(a)(2)(v)		73.71(c)	
100			20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		OTHER (Specify in	
			20.405(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		Abstract below and	
			20.405(a)(1)(iv)		X 50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)		in Text, NRC Form	
			20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)		366A)	

LICENSEE CONTACT FOR THIS LER (12)

NAME

J. W. Pitesa

TELEPHONE NUMBER

AREA CODE

(704)

875-4788

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
B7	HHF	VALVOP	N383	YES					

SUPPLEMENTAL REPORT EXPECTED (14)

X YES (If yes, complete EXPECTED SUBMISSION DATE)

NO

EXPECTED SUBMISSION DATE (15)

MONTH

5

DAY

12

YEAR

97

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

Unit Status: Unit 1 was in No Mode (Defueled) and Unit 2 was in Mode 1 (Power Operation) at 100 percent power.

Event Description:

During preventive maintenance of the hydraulic actuators for Feedwater Isolation valves (FWIVs) 1-CF28 and 1-CF30, deenergizing the train A or B safety solenoids did not cause the accumulator to discharge pressure and close the valve. Subsequent testing of Unit 2 FWIVs determined that valves 2CF28 & 2CF30 were unable to close within the required time.

Event Cause:

The FWIV failures are attributed to hydraulic oil degradation which produces gel and phosphate salts that interfere with the movement of critical parts within the solenoid valves. Oil degradation occurs naturally over time but is accelerated with higher water content and higher oil temperature, coincident with stagnated oil. Design of the actuator exposes the oil to heat from the normally energized solenoid coils.

Corrective Action:

The Unit 2 FWIV solenoid coils were replaced and the plungers were cleaned to remove the gel, phosphate salts, and degraded oil. The Unit 2 FWIVs were then successfully retested. The Preventive Maintenance frequency to clean, inspect and change oil for the solenoids was changed from 3 Refueling Outages (RFO) to 1 RFO. Modifications were implemented to reduce the solenoid coil temperature. Similar actions will be taken for the Unit 1 FWIVs.