NRC FORM 366 (12-81)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

APPROVED BY OMB 3150-0011 EXPIRES 4-30-82

CONTROL BLOCK: (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1	LICENSEE CODE: N C M G S 1 (2) LICENSE NUMBER: 0 0 - 0 0 0 0 0 - 0 0 (3) LICENSE TYPE: 4 1 1 1 1 (4) CAT (5)
CON'T 0 1	REPORT SOURCE: L (6) DOCKET NUMBER: 0 5 0 0 0 3 6 9 (7) EVENT DATE: 0 9 0 7 8 3 (8) REPORT DATE: 1 0 0 5 8 3 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 While in Mode 1, channel 4 of the loose parts monitor was declared inoperable be-
0 3 cause of circuit noise and continuous alarm. This constitutes a degradation of the
0 4 loose-part detection system (T.S.3.3.3.10) which is reportable pursuant to T.S.6.
0 5 9.1.11(b). There had been no indication of a loose part in the reactor coolant
0 6 system prior to the inoperability of channel 4. Additionally, all other channels
0 7 remain operable, including channel 3 which also monitors the upper reactor vessel.
0 8 Health and safety of the public are unaffected.

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP SUBCODE	VALVE SUBCODE
0 9	I F (11)	E (12)	X (13)	X X X X X X (14)	Z (15)	Z (16)

(17) LER/RO REPORT NUMBER: EVENT YEAR 8 3 — SEQUENTIAL REPORT NO. 0 7 7 / OCCURRENCE CODE 0 3 REPORT TYPE L — REVISION NO. 0

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER (26)
Z (18)	X (19)	Z (20)	Z (21)	0 0 0 0 0	Y (23)	N (24)	L (25)	X 9 9 9

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 A check of the control cabinet indicated a probable short either in the accelero-
1 1 meter (vibration sensor) or the flexible cable which connects it to conduit pro-
1 2 tected wiring. Since both of these components are located within the reactor vessel
1 3 cavity which is inaccessible in Modes 1-4, repair work will be performed during
1 4 the next refueling outage.

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
1 5	C (28)	0 9 0 (29)	NA	B (31)	Routine Surveillance

	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
1 6	Z (33)	Z (34)	NA	NA

	PERSONNEL EXPOSURES NUMBER	TYPE	DESCRIPTION (39)
1 7	0 0 0 (37)	Z (38)	NA

	PERSONNEL INJURIES NUMBER	DESCRIPTION (41)
1 8	0 0 0 (40)	NA

8310170430 831005
PDR ADOCK 05000369
S PDR

	LOSS OF OR DAMAGE TO FACILITY TYPE	DESCRIPTION (43)
1 9	Z (42)	NA

IE22

	PUBLICITY ISSUED	DESCRIPTION (45)	NRC USE ONLY
2 0	N (44)	NA	

NAME OF PREPARER Phillip B. Nardoci PHONE (704) 373-7432

DUKE POWER COMPANY
P.O. BOX 33189
CHARLOTTE, N.C. 28242

HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

TELEPHONE
(704) 373-4531

October 5, 1983

83 OCT 11 P1:51

Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street NW, Suite 2900
Atlanta, Georgia 30303

Subject: McGuire Nuclear Station Unit 1
Docket No. 50-369
LER/RO-369/83-77

Dear Mr. O'Reilly:

Please find attached Reportable Occurrence Report RO-369/83-77. This report concerns T.S. 3.3.3.10, "The Loose-Part Detection System Shall Be Operable". This incident was considered to be of no significance with respect to the health and safety of the public.

Note this this is also being submitted as a special report pursuant to Technical Specification 6.9.2 in fulfillment of the reporting provisions of T.S. 3.3.3.10 (Action a).

Very truly yours,

H. B. Tucker 1/SS

Hal B. Tucker

PBN:jfw
Attachment

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

Records Center
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

Mr. W. T. Orders
NRC Resident Inspector
McGuire Nuclear Station

OFFICIAL COPY

IE 22

DUKE POWER COMPANY
McGUIRE NUCLEAR STATION
REPORTABLE OCCURRENCE REPORT NO. 369/83-77

REPORT DATE: October 5, 1983

FACILITY: McGuire Unit 1, Cornelius, NC

IDENTIFICATION: Loose Parts Monitor Channel 4 Declared Inoperable

DESCRIPTION: On September 7, 1983 channel 4 of the Loose Parts Monitor was declared inoperable because of circuit noise and continuous alarm. A check of the control cabinet indicated a probable short either in the accelerometer (vibration sensor) or the flexible cable which connects it to conduit protected wiring. Both of these components are located within the reactor vessel cavity which is inaccessible in Modes 1-4. Therefore, repair work will be performed during the refueling outage which is scheduled to begin on January 27, 1984.

This occurrence is reportable as an LER pursuant to Technical Specification 3.3.3.10, which also requires submission of a special report within 10 days after any channel has been inoperable for 30 days. Since repair work will not be performed until the next refueling outage the channel will be inoperable for more than 30 days. The occurrence is attributed to Component Failure/Malfunction. No determination of failure vs. malfunction is possible until the repairs are completed.

EVALUATION: The Loose Parts Monitor System consists of piezoelectric sensors, preamplifiers, a signal processor unit, and other peripheral equipment which monitor the reactor coolant system for loose metallic parts. Loose parts may be introduced to the reactor coolant system by failed components or by maintenance or refueling activities.

Channel 4 is one of two channels which is intended to detect loose parts in the upper reactor vessel. The accelerometer is mounted on the control rod drive extension tube protection shroud and connected to conduit protected wiring via a flexible cable. Both of these components are inaccessible during power operation.

During troubleshooting a test signal was provided to the signal processor unit by connecting a spare accelerometer and preamplifier to the channel 4 input. The alarm and excessive noise cleared. This test indicated that the source of the excessive noise is in the wiring upstream of the signal processor, most likely the accelerometer or flexible cable. (The signal preamplifier is not suspected because it has no history of failure, while several problems with the accelerometers and flexible cables occurred during original setup.)

CORRECTIVE ACTION: Channel 4 accelerometer and flexible cable will be checked during the Unit 1 refueling outage which is scheduled to begin January 27, 1984. The adequacy of these corrective measures will be demonstrated by the absence of circuit noise after repairs are completed.

SAFETY ANALYSIS: The Loose Parts Monitoring System provides detection of loose metallic parts in the reactor coolant system. This detection capability is somewhat degraded with the loss of channel 4. However, there had been no indication of a loose part in the reactor coolant system prior to the inoperability of channel 4.

Additionally, all other channels remain operable, including channel 3 which also monitors the upper reactor vessel. The health and safety of the public are unaffected by this incident.