Commonwealth Edison
Quad Cities Nuclear Power Station
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Telephone 309/654-2241

D. Lavallee

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NJK-77-9

January 6, 1977

J. Keppler, Regional Director
Office of Inspection and Enforcement
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Reference: Quad-Cities Nuclear Power Station
Docket No. 50-265, DPR-30, Unit 2
Appendix A, Sections 3.1.A and 6.6.B.2.a, Table 3.1-3

Enclosed please find Reportable Occurrence Report No. RO 50-265/76-18 for Quad-Cities Nuclear Power Station. This event had initially been designated as a Non-Reportable Occurrence on November 14, 1976 and the investigation report was completed on December 13, 1976. However, subsequent review and analysis of this occurrence have revealed that the event was reportable as required by Technical Specification 6.6.B.2.a.

Very truly yours,

COMMONWEALTH EDISON COMPANY
QUAD-CITIES NUCLEAR POWER STATION

N. J. Kalivianakis
Station Superintendent

NJK/LFG/lk

584

cc: G. A. Abrell

JAN 12 1977

LICENSEE EVENT REPORT

CONTROL BLOCK: [ ] (1–6)

(PLEASE PRINT ALL REQUIRED INFORMATION)

	LICENSEE NAME	LICENSE NUMBER	LICENSE TYPE	EVENT TYPE
01	ILQAD2	00-00000-00	4 1 1 1 1	03
(7–8)	(9–14)	(15–25)	(26–30)	(31–32)

	CATEGORY	REPORT TYPE	REPORT SOURCE	DOCKET NUMBER	EVENT DATE	REPORT DATE
01 CON'T		L	L	050-0265	111476	010677
(7–8)	(57–58)	(59)	(60)	(61–68)	(69–74)	(75–80)

EVENT DESCRIPTION

02 While performing the Reactor Protection System (RPS) Channel B Main Steam Isolation
03 Valve (MSIV) monthly Scram Sensor Functional Test, a half-scram signal was not
04 received for MSIV AO-2-203-1D. Also, a MSIV not fully open alarm did not annunciate
05 on control room panel 902-5. The immediate corrective action was to remove fuse
06 590-702H to de-energize relay 590-102H in RPS Channel B, thereby placing the

	SYSTEM CODE	CAUSE CODE	COMPONENT CODE	PRIME COMPONENT SUPPLIER	COMPONENT MANUFACTURER	VIOLATION
07	IA	E	CKTBRK	L	N015	N
(7–9)	(10)	(11)	(12–17)	(43)	(44–47)	(48)

CAUSE DESCRIPTION

08 (Proximate Cause-Component Failure) One of the RPS limit switches on AO-2-203-1D,
09 which is connected to relay 590-102H, failed due to the harsh environment inside the
10 drywell created by high temperatures in the vicinity of the Main Steam Lines.

	FACILITY STATUS	% POWER	OTHER STATUS	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION
11	F	038	NA	B	Monthly MSIV Scram Functional Test
(7–8)	(9)	(10–12)	(13–44)	(45)	(46–80)

	FORM OF ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY	LOCATION OF RELEASE
12	Z	Z	NA	NA
(7–8)	(9)	(10)	(11–44)	(45–80)

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION
13	000	Z	NA
(7–8)	(9–11)	(12)	(13–80)

PERSONNEL INJURIES

	NUMBER	DESCRIPTION
14	000	NA
(7–8)	(9–11)	(12–80)

OFFSITE CONSEQUENCES

15 NA

LOSS OR DAMAGE TO FACILITY

	TYPE	DESCRIPTION
16	Z	NA
(7–8)	(9)	(10–80)

PUBLICITY

17 NA

ADDITIONAL FACTORS

18 (Event Description continued) instrument channel in the tripped condition. The
19 590-102G relay to RPS Channel A was then tested and found to be operable. (cont)

NAME: James Swales PHONE: 309-654-2241 Ext. 248

GPO 881-667

EVENT DESCRIPTION CONTINUED

During this occurrence, the scram relays on Channel B were functional; only the limit switch connected to relay 590-102H had failed. All other MSIV's performed satisfactorily during the test, and would have performed as required had an MSIV closure condition presented itself. The 590-102G relay was functional; therefore, the 1D MSIV would have initiated a half-scram on Channel A upon 10% closure.

Corrective Action to Prevent Recurrence

The immediate corrective action taken assured that the 1D MSIV would initiate a half-scram on RPS Channel B. The limit switch was replaced during a Unit Two weekend outage from December 2 to December 6, 1976. Subsequent Scram Functional Testing was successful.

Failure Data

There have been many instances of MSIV limit switch failure in the past. Most of these failures have attributed to the harsh environment in the area of the MSIV's. The original limit switches on all MSIV's in the Unit One and Unit Two Drywells have been replaced with hermetically sealed limit switches. This corrective action has greatly reduced the frequency of occurrences of this type. The outboard MSIV's of Unit Two have these new switches, and those on Unit One will be replaced during the upcoming refueling outage. Investigations are in progress to determine a further solution to the limit switch failure problem. A possible remedy may be moving the limit switches out of the direct line of any MSIV stem leaks, to thus provide a better location for the switches. The limit switches are manufactured by NAMCO, type SL-3CT.