



**Commonwealth Edison**  
Quad-Cities Nuclear Power Station  
Post Office Box 216  
Cordova, Illinois 61242  
Telephone 309/654-2241

IE FILE COPY

*D. LASHAM*

NJK-76-474

December 16, 1976

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. 50-254, DPR-29, Unit 1  
Docket No. 50-265, DPR-30, Unit 2  
Appendix A, Sections 3.3.B.3.b, 6.6.B.1.h  
Generic Reload Application for 8X8 Fuel, NEDO 20360,  
Supplement 4 April 1, 1976, Section 6.3.2.3.2.1.c

Enclosed please find Reportable Occurrence Report No. 50-254/76-35  
for Quad-Cities Nuclear Power Station. This occurrence was previously  
reported to Region III, Office of Inspection and Enforcement by telephone  
on December 3, 1976 and by telecopy on December 6, 1976.

This report is submitted to you in accordance with the requirements  
of Technical Specification 6.6.B.1.

Very truly yours,

COMMONWEALTH EDISON COMPANY  
QUAD-CITIES NUCLEAR POWER STATION

N. J. Kalivianakis  
Station Superintendent

NJK/EAS/1k

cc: G. A. Abrell

13046

# LICENSEE EVENT REPORT

CONTROL BLOCK:

1					6

(PLEASE PRINT ALL REQUIRED INFORMATION)

LICENSEE NAME  
01 1 L Q A D 1 14  
7 8 9

LICENSE NUMBER  
0 0 - 0 0 0 0 0 - 0 0 25  
15

LICENSE TYPE  
4 1 0 0 0 30  
26

EVENT TYPE  
0 1 31 32

CATEGORY  
01 CON'T 57 58  
7 8

REPORT TYPE  
T 59

REPORT SOURCE  
L 60

DOCKET NUMBER  
0 5 0 - 0 2 5 4 68  
61

EVENT DATE  
1 2 0 3 7 6 74  
69

REPORT DATE  
1 2 1 6 7 6 80  
75

[illegible]

02	Quad-Cities Technical Specification 3.3.B.3.b states that the rod worth minimizer										80
03	shall be operable below 10% rated power. However, the generic analysis for the										80
04	rod drop accident for BWR 3's (General Reload Application for 8X8 fuel, NEDO 20360,										80
05	Supplement 4 April 1, 1976, section 6.3.2.3.2.1.c) states that the RWM should be										80
06	operable below 20% power.										80
07	<div> <div>SYSTEM CODE</div> <div>CAUSE CODE</div> <div>COMPONENT CODE</div> <div>PREVIE COMPONENT SUPPLIER</div> <div>COMPONENT MANUFACTURER</div> <div>VIOLATION</div> </div> <div> <div>Z Z</div> <div>F</div> <div>Z Z Z Z Z Z</div> <div>Z</div> <div>Z 9 9 9</div> <div>N</div> </div> <div> <div>7 8 9 10</div> <div>11</div> <div>12 17</div> <div>43</div> <div>44 47</div> <div>48</div> </div>										

## CAUSE DESCRIPTION

08		In order to standardize control rod sequencing for the rod drop accident (RDA)																		80
09		analysis, the General Electric Company proposed the generic Banked Position																		80
10		Withdrawal Sequences (BPWS) and at the same time raised the RWM (cont on attachment)																		80

  

11		FACILITY STATUS		% POWER		OTHER STATUS		METHOD OF DISCOVERY		DISCOVERY DESCRIPTION										80
E		095		NA		Z		Station review of NEDO 20360										80		

  

12		FORM OF ACTIVITY RELEASED		CONTENT OF RELEASE		AMOUNT OF ACTIVITY		LOCATION OF RELEASE										80
Z		Z		NA		NA										80		

## PERSONNEL EXPOSURES

NUMBER				TYPE	DESCRIPTION
1	3	0	0	Z	NA

## PERSONNEL INJURIES

NUMBER			DESCRIPTION
14	000		NA

### OFFSITE CONSEQUENCES

15 NA 80

LOSS OR DAMAGE TO FACILITY

TYPE			DESCRIPTION
1	6	7	NA

## PUBLICITY

17	NA
----	----

### ADDITIONAL FACTORS

18 80

19 | \_\_\_\_\_ 80

PAGE 2

#### CAUSE DESCRIPTION CONTINUED

operability requirement to 20% power. This was first documented in Supplement 3 September 1975 of the Generic Reload Application for 8X8 fuel, NEDO 20360, section 6.3.2.3.2. At that time, Quad-Cities Units 1 and 2 used a plant-unique analyses for its control rod array definitions which allowed the station to write its own sequences and still adhere to a maximum incremental reactivity insertion for a RDA of 1.3%  $\Delta K$ . Since September 1975, there have been two licensing submittals prepared and approved for Quad-Cities Station. Unit 1 Reload Two License Submittal was prepared in August 1975 and approved on-site in December 1975. This document referenced the Generic Reload Application for 8X8 fuel, NEDO 20360, Supplement 2, May 1975. This application did not include the RWM operability requirement of 20% power. Since Quad-Cities did not use the BPWS, it was presumed that the 20% RWM operability requirement did not apply. Unit 2 Reload Two License Submittal was prepared in June 1976, and approved on-site in August 1976. This document referenced supplement 4, April 1976 of NEDO 20360. The supplement called for the RWM to be operable up to 20% power. For this reload, General Electric supplied only an analysis according to the BPWS and not the usual unique analysis. In conjunction with consideration of the implications for Unit 2, it was discovered that the 20% power RWM operability limit would not only apply to Unit 2 but might also apply to Unit 1. This was not found earlier because the Unit 1, Cycle 3, licensing submittal did not reference the correct NEDO 20360 supplement; it referenced Supplement 2 rather than Supplement 3. Confirmation that the RWM operability limit was 20% power for both units was received on December 2, 1976.

#### ANALYSIS OF OCCURRENCE

Even though the past operability requirement for the RWM was 10% power the RWM is designed to alarm and apply blocks up to 20% power. But no provision of a substitute verification was made if the RWM was inoperable between 10 and 20% power. Since September 1975, both units have operated in the 10-20% power region for a total of about 60 hours. There is no record of an out of sequence rod between the 10 and 20% power range during this time. Therefore, the consequences of the occurrence are minimal. The health and safety of the public was not affected by this occurrence.

#### CORRECTIVE ACTION

On December 3, 1976, orders were written in the Daily Order Book requiring RWM operability below 20%. A change to the Technical Specifications has been initiated to require RWM operability below 20% power. All future revisions and supplements to the Generic Reload Application for 8X8 fuel, NEDO 20360 will be on-site reviewed. These actions should be sufficient to preclude an event of this type from recurring.

#### FAILURE DATA

There has not been an occurrence of this type before at Quad-Cities Station. There are no safety implications based on cumulative experience.