

LICENSEE EVENT REPORT

CONTROL BLOCK:

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(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0	1	1	1	L	Q	A	D	1	2	0	0	0	-	0	0	0	-	0	0	0	3	4	1	1	1	1	4			5	
7	8	9						14	15									25	26							30			57	CAT	58
LICENSEE CODE								LICENSE NUMBER																	LICENSE TYPE						

CON'T

REPORT SOURCE 01 L 6 0 5 0 0 0 2 5 4 7 0 9 2 1 7 9 3 1 0 1 9 7 9 9

7 8 60 61 DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | Prior to and during startup, T.S. 3.6.C.3 limits were exceeded from 1:30 a.m. until
0 3 | 10:27 a.m. for reactor water conductivity and from 1:30 a.m. until 2:15 p.m. for
0 4 | chloride concentration. The chloride-oxygen concentration during this occurrence
0 5 | was well below the failure boundary of figure 4.6-1 of T.S. 3.6.C. Thus, the
0 6 | consequences of this occurrence were minimal. An orderly unit shutdown was started
0 7 | and the reactor water cleanup demineralizers were regenerated.

08 0

7 8

SYSTEM CODE CAUSE CODE CAUSE SUBCODE COMPONENT CODE COMP. SUBCODE VALVE SUBCODE

9 10 11 12 13 14 15 16

0 9 Z Z A D Z Z Z Z Z Z Z Z

(17) LER/RO REPORT NUMBER 79 —

SEQUENTIAL REPORT NO. 027 /

OCCURRENCE CODE 03

REPORT TYPE L —

REVISION NO. 0

ACTION TAKEN		FUTURE ACTION		EFFECT ON PLANT		SHUTDOWN METHOD		HOURS				ATTACHMENT SUBMITTED		NPRD-4 FORM SUB.		PRIME COMP. SUPPLIER		COMPONENT MANUFACTURED			
H	18	Z	19	B	20	A	21	0	0	0	7	Y	23	N	24	Z	25	Z	Z	Z	Z
33		34		35		36		37			40	41		42		43		44			

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The cause of this occurrence was personnel error. The chemistry technician should

1 1 have realized the abnormal conductivity value and taken appropriate action. Cor-

1 2 rective action was to inform the involved personnel of the importance for knowing

1 3 all surveillance limits and what actions should be taken if those limits are

1 4 exceeded.

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

ACTIVITY CONTENT
RELEASED OF RELEASE

1 6 Z 33 Z 34

AMOUNT OF ACTIVITY (35)
NA

LOCATION OF RELEASE (36)
NA

PERSONNEL EXPOSURE									
NUMBER			TYPE	DESCRIPTION					
1	7	000	(37) Z (38)	NA (39)					

PERSONNEL INJURIES		DESCRIPTION	
NUMBER			
0	0	0	NA

		8		9		11		12		
		LOSS OF OR DAMAGE TO FACILITY						(43)		
		TYPE		DESCRIPTION						
1	9	Z	(42)	NA						1269 271

7 8 9 10
PUBLICITY
ISSUED DESCRIPTION (45) 7911050292 NRC USE ONLY
(2) (0) (Z) (44) NA

NAME OF PREPARER Thomas Markwalter

PHONE: 309-654-2241, Ext. 290

- I. LER NUMBER: 79-27/03L-0
- II. LICENSEE NAME: Commonwealth Edison Company
Quad-Cities Nuclear Power Station
- III. FACILITY NAME: Unit One
- IV. DOCKET NUMBER: 950-254
- V. EVENT DESCRIPTION:

On September 21, 1979, at 0140, Unit One was placed in the start-up mode and the reactor was made critical at 0255. Prior to startup, the unit had been shutdown for a six day outage, fulfilling requirements of NRC IE Bulletin 79-02. At 0140, analysis of reactor water indicated conductivity was 18 μ mhos/cm, which exceeds the 10 μ mhos/cm limit of Technical Specification 3.6.C.3. During this time, the chemistry technician did not notify the unit operator, and startup continued. At 0530, another sampled reactor water indicated that conductivity was 20 μ mhos/cm, but no notification was given to the operating staff. At 0730, the chemistry staff found the conductivity exceeding the limits for startup and notified the unit operator, whereby control rod insertion was initiated. Following this, reactor water cleanup demineralizers were regenerated and low conductivity coolant was added to the reactor. At 1030, reactor water conductivity decreased to 8.7 μ mhos/cm and the unit operator was notified to resume unit startup.

At 1050, the laboratory chloride electrode was recalibrated and analysis of reactor water showed the chloride concentration to be 0.18 ppm. The unit operator was immediately notified that reactor water exceeded startup limits for chloride concentration and an orderly shutdown was initiated. At 1415, the chloride concentration was reduced to 0.035 ppm and the conductivity had dropped to 7.1 μ mhos/cm. The unit operator was notified that both parameters were within limits for startup and control rod insertion was terminated.

As a result of this occurrence, Technical Specification 3.6.C.3 limits were exceeded from 0130 until 1027 for conductivity and from 0130 until 1415 for chloride concentration on September 21, 1979.

VI. PROBABLE CONSEQUENCES OF THE OCCURRENCE:

Technical Specification 3.6.C.3 is concerned with limits for conductivity and chloride concentration to prevent stress corrosion cracking of stainless steel. Figure 4.6-1 of Technical Specifications 3.6.C; Limiting Conditions for Operation Bases, indicates the stainless steel failure boundary for ranges of chloride-oxygen combinations in reactor water. The chloride-oxygen concentration for unit one reactor water during this startup was well below this failure boundary. Thus, the safety consequences of this occurrence are minimal.

VII. CAUSE:

The primary cause of this occurrence was due to personnel error; procedure inadequacy was a contributing factor. The chemistry technician should have realized the abnormal conductivity value and taken appropriate action by notifying the unit operator and chemistry staff.

Due to the fact that the limits for reactor water chemistry were not specifically stated on the laboratory surveillance log sheet, the technician was not aware that reactor water conductivity exceeded limits for startup; and therefore, did not notify the unit operator or chemistry staff of the chemistry results.

The basis of this transient was the reactor water had degraded to an abnormally high conductivity during the outage. Reactor water conductivity log indicates the cleanup demineralizers were depleted at 0615 on September 17, 1979 and no corrective action was taken to regenerate the demineralizers.

VIII. CORRECTIVE ACTIONS:

The responsible chemistry technicians were contacted and told the significance of their lack of action during this event. In addition, all radiation/chemistry department technicians were informed of the importance for knowing all surveillance limits and actions that should be taken if these limits are exceeded. To prevent a reoccurrence of this nature, the start-up surveillance procedure will be reviewed and appropriate changes made that will delineate the proper limits and corrective actions to be taken. The frequency of chloride electrode calibration will be increased to accumulate a history of instrument drift so that an interval can be selected which will minimize erroneous analyses.

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