

LICENSEE EVENT REPORT

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

01	1	1	L	Q	A	D	1	2	0	0	0	-	0	0	0	0	3	4	1	1	1	1	4				5
7	8	9	LICENSEE CODE					14	15	LICENSE NUMBER							25	26	LICENSE TYPE			30	57	CAT 58			

01	L	6	0	5	0	0	0	2	5	4	7	0	3	2	4	8	3	3	0	4	2	0	8	3	9
7	8	60	61	DOCKET NUMBER					68	69	EVENT DATE				74	75	REPORT DATE			80					

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 | On March 22, 1983, while performing the Station Battery Weekly Surveillance, QOS

03 | 6900-1, Cell #100 in the Unit One 250 Volt battery was found to be approximately

04 | one-half full of electrolyte. On March 24, the normal loads were transferred to the

05 | Unit Two 250 Volt battery and Cell #100 was jumpered out; thus ensuring the battery

06 | was fully operable. Technical Specification 3.9.C.3 allows the 250 Volt battery to

07 | be inoperable for three days. The low electrolyte level in Cell #100 would have

08 | reduced the capacity of the total battery. Once the cell was jumpered out, full

09 | battery capacity was restored; based upon results of previous battery discharge

10 | tests. Thus, safe Reactor operation was not affected as a result

11 | of this event.

09	E	C	11	B	12	C	13	B	A	T	T	R	Y	14	Z	15	Z	16						
7	8	9	10	11	12	12	13	13	14	15	16	17	18	19	20	21	22							
17	8	3	0	1	4	0	3	L	0	0	Z	0	0	0	0	Y	N	L	G	1	3	5		
7	8	9	21	22	23	24	26	27	28	29	30	31	32	33	34	35	36	37	40	41	42	43	44	47

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 | A crack was discovered in the bottom corner of the casing, apparently caused when

11 | the cell was installed in February 1979. The crack slowly enlarged until it allowed

12 | the electrolyte to escape. The cell had functioned properly up until this time.

13 | At 8 a.m., on April 15, following procurement of a new cell the battery was taken

14 | out of service. The jumpers were removed, the cell was replaced, and the battery

15 | was returned to service by 2:30 p.m. on the same day.

15	E	28	1	0	0	29	NA	B	31	Weekly Battery Surveillance	32
7	8	9	10	11	12	13	44	45	46	80	
16	Z	33	Z	34	NA	35	NA	36			
7	8	9	10	11	12	13	44	45	80		
17	0	0	0	37	Z	38	NA	39			
7	8	9	10	11	12	13	44	80			
18	0	0	0	40	NA	41		42			
7	8	9	10	11	12	44	80				
19	Z	42	NA	43							
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20	N	44	NA	45							
7	8	9	10	11	12	44	80				

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NRC USE ONLY

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- I. LER NUMBER: LER/RO 83-14/03L-0
- II. LICENSEE NAME: Commonwealth Edison Company
Quad-Cities Nuclear Power Station
- III. FACILITY NAME: Unit One
- IV. DOCKET NUMBER: 050-254
- V. EVENT DESCRIPTION:

While performing the Station Battery Weekly Surveillance, QOS 6900-1, on March 22, 1983, at 11:45 p.m., the Equipment Attendant noticed that Cell #100 in the Unit One 250 Volt battery was approximately one-half full of electrolyte. Clean demineralized water was added to the cell, however, proper electrolyte level could not be maintained.

The 250 Volt battery was considered to be potentially inoperable due to the low electrolyte level within Cell #100. Work Request Q25168 was written to have the cell removed and replaced with a spare cell of the same type and capacity.

Steps to transfer the Unit One 250 Volt DC System normal loads to the Unit Two 250 Volt DC System were initiated at 11 a.m. on March 24, 1983. This was necessary to facilitate a jumper installation across the damaged cell since a spare replacement cell was not immediately available. The Unit One 250 Volt battery was completely isolated and out of service by 12:32 p.m. on the same day. Cell #100 was disconnected and removed from the 250 Volt battery. Electrical Maintenance personnel fabricated and installed the jumpers from Cell #99 to Cell #101 to "bypass" Cell #100's position.

Unit One 250 Volt DC normal loads were then transferred back to the Unit One 250 Volt DC System. The Unit One 250 Volt battery (without Cell #100) was then returned to service on March 24, 1983, at 9:10 p.m. Technical Specification 3.9.C.3 permits continued Reactor operation for three days following a 250 Volt battery being deemed inoperable.

VI. PROBABLE CONSEQUENCES OF THE OCCURRENCE:

On-site auxiliary power, off-site power, and each of the three stand-by Diesel Generators were available throughout the duration that the 250 Volt battery was potentially inoperable. The Unit Two 250 Volt DC System remained operable, which allowed transfer of the Unit One 250 Volt DC loads to the Unit Two 250 Volt DC System for the short period of time involved.

VI. PROBABLE CONSEQUENCES OF THE OCCURRENCE: (Continued)

Although Cell #100 was one-half full of electrolyte, conversations with the vendor revealed the 250 Volt battery was capable of discharging a limited amount of current. Operation of the system could have continued during emergency conditions, however, the length of time would be dependent upon the discharge current rate. By removing Cell #100 from the battery, rated battery discharge capacity was restored. Based upon the latest battery discharge test performed on October 10, 1982, the projected final battery voltage with Cell #100 removed would be approximately 222 Volts DC. This value is considerably larger than the minimum specified battery voltage of 210 Volts DC.

VII. CAUSE:

Upon inspection of Cell 100, it was discovered that a crack had developed in the casing at the point where the side meets the bottom of the casing. This allowed the electrolyte to drain to approximately one-half of the level required for proper operation.

The crack apparently started when the cell was installed in February, 1979. Several weeks prior to March 22, the level was found to be low and clean demineralized water was added to the cell. By March 22, the crack had enlarged to a size that allowed the electrolyte to drain out at an increased rate.

The Unit One 250 Volt battery was manufactured by Gould Industrial Battery Division, Model FPS-25, and is rated at 996 Ampere-Hours. The battery was replaced on February, 1979, and has a higher ampere-hour rating than the original battery.

VIII. CORRECTIVE ACTION:

The immediate corrective action was to temporarily transfer the Unit One 250 Volt DC System loads to the Unit Two 250 Volt DC System in order to install jumpers from Cell #99 to Cell #101. This effectively bypassed Cell #100 since a spare replacement cell was not immediately available. The bypassed cell was then removed from its location in the battery rack. The Unit One 250 Volt DC loads were then transferred back to the Unit One 250 Volt DC System, and the Unit One 250 Volt battery was returned to service on March 24, 1983, at 9:10 p.m. On April 15, 1983, the Unit One 250 Volt DC System normal loads were transferred to the Unit Two to facilitate the installation of a new like-for-like cell replacement. The Unit One system normal loads were transferred back, and the battery was returned to service at 2:30 p.m. on the same day.

The crack in Cell #100 is considered an isolated incident. The weekly battery surveillance is viewed as an adequate means to identify any adverse conditions concerning the battery cells.