



**Commonwealth Edison**  
 One First National Plaza, Chicago, Illinois  
 Address Reply to: Post Office Box 767  
 Chicago, Illinois 60690

May 20, 1982

Mr. Darrell G. Eisenhut, Director  
 Division of Licensing  
 U.S. Nuclear Regulatory Commission  
 Washington, DC 20555

Subject: Dresden Station Units 2 and 3  
 Quad Cities Station Units 1 and 2  
 NUREG 0737 Item II.K.3.17  
 Additional Information  
 NRC Docket Nos. 50-237/249  
 and 50-254/265

Reference (a): D. B. Vassallo letter to L. DelGeorge  
 dated March 17, 1982.

Dear Mr. Eisenhut:

Reference (a) requested that the Commonwealth Edison Company provide, within sixty (60) days, additional information concerning ECCS outage reports for our Dresden and Quad Cities Stations. The attachments to this letter provide the requested information.

To the best of my knowledge and belief, the information contained in the attachments is true and correct. In some respects this information is not based upon my personal knowledge but upon information furnished by other Commonwealth Edison employees. Such information has been reviewed in accordance with Company practice and I believe it to be reliable.

Please address any further questions that you or your staff may have concerning this matter to this office.

One (1) signed original and fifty-nine (59) copies of this letter with attachments are provided for your use.

Very truly yours,

E. Douglas Swartz  
 Nuclear Licensing Administrator

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Enclosure

cc: J. G. Keppler, Region III  
 Region III Inspector - Dresden  
 Region III Inspector - Quad Cities

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*1/4*

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ATTACHMENT

COMMONWEALTH EDISON COMPANY

Dresden Station Units 2 and 3

Quad Cities Station Units 1 and 2

NUREG 0737 Item II.K.3.17 - response to  
request for additional information

PART I - Dresden Station Response

Part II - Quad Cities Station Response

PART I

Dresden Station Response

In supplement to our previous submittal, J. S. Abel to D. G. Eisenhut dated December 31, 1980, the following information is provided in response to the Reference (a) request for additional information. Also, the ECCS equipment outage information for 1980 is provided.

In general, Dresden Station does not take ECCS systems out of service during unit operation for either surveillance testing or preventive maintenance. With respect to Technical Specification Surveillance Testing, the ECCS trains can be operationally tested without rendering them unavailable to perform the system design function. Additionally, preventive maintenance functions are scheduled and completed during refueling periods when in accordance with Technical Specifications, the ECCS systems are not required to be operational.

The three Station Emergency Diesel Generators represent ECCS components which undergo inspections and preventive maintenance while the reactors are in operation. These procedures, which are based on calendar time and not engine hours, may or may not coincide with a scheduled outage. The following summary listing will show the frequency of these inspections and the approximate time the engine is out of service to complete the preventive maintenance operations.

<u>Frequency</u>	<u>Outage Time</u>
Monthly	None required
Once per 3 months	8 hours
Once per 6 months	48 hours
Once per year	120 hours

During the time period that a given diesel is out of service, no ECCS systems are rendered inoperative due to the diesel outage. Taking a diesel out of service is addressed by Technical Specifications and requires operational readiness testing of certain ECCS components, but it does not require any components to be taken out of service based solely on the Diesel Generator outage. This testing, as directed by Technical Specifications, includes daily testing of the back-up engine and all low pressure ECCS systems for the affected unit.

We believe that clarification needs to be made with respect to a statement made in Reference (a). Although Technical Specifications will allow some ECCS components to "have substantial outage

times", i.e., 1 of 4 LPCI pumps (3 required for FSAR requirements) may be out of service for 30 days, the Technical Specification limiting conditions for operation are very specific when addressing the unavailability of any ECCS system train or subsystem. By Technical Specifications, the "unavailability" of an ECCS system train for extended periods is addressed. If any ECCS subsystem becomes inoperative power operation is allowed for the successive 7 days.

The following is a summary listing of the ECCS failures which occurred in the year 1980.

July 24, 1980                      System: CCSW

A through wall crack was discovered in the casing of the 3-1501-44A pump. Corrective Action: The pump was taken out of service and the crack repaired.

Duration: 24 hours

April 25, 1980                      System: ADS

The Target Rock Valve 3-203-3A failed to open at full system pressure (during post outage surveillance testing). Investigation showed the air actuator to be improperly installed. Corrective Action: The air actuator was removed and reinstalled properly.

Duration: 19 hours

April 26, 1980                      System: ADS

During post outage surveillance testing, the Electromatic Relief Valve 3-203-3B would not open at full system pressure. Investigation showed the Pilot Valve to be out of adjustment. Corrective Action: Adjusted Pilot Valve.

Duration: 23 hours

April 28, 1980                      System: ADS

During post outage testing, the 3-203-3B Electromatic Valve would not open at full system pressure. Corrective Action: Replaced Pilot Valve.

Duration: 11 hours

April 29, 1980                      System: ADS

During post outage surveillance testing, the 3-203-3B Electromatic Relief Valve would not open at full system pressure. Corrective Action: Replaced entire Electromatic Valve assembly with a spare unit.

Duration: 35 hours

April 30, 1980 System: ADS

During post outage surveillance testing, the 3-203-3B Electromatic Relief Valve would not open at full system pressure. Corrective Action: Adjusted the Pilot Valve and installed and replaced the 3/4 inch pilot valve bleed-off line with a 1 inch line. Duration: 50 hours

April 30, 1980 System: ADS

During post outage surveillance testing, the 3-203-3B Electromatic Relief Valve failed to open at full system pressure. An investigation revealed a jammed cut-out switch on the solenoid coils. Corrective Action: Cleaned and adjusted to cut-out switch. Duration: 50 hours

April 25, 1980 System: ADS

During post outage surveillance testing, the 3-203-3E Electromatic Relief Valve failed to open at full system pressure. An investigation showed the Pilot Valve to be out of adjustment, and the pilot valve discharge line to be partially blocked. Corrective Action: Cleaned the pilot valve discharge line and adjusted the pilot valve. Duration: 10 hours

October 22, 1980 System: HPCI

Motor Operated Valve 3-2301-4 failed to open. Subsequent investigation showed the auxiliary contact to be dirty. Corrective Action: Cleaned auxiliary contact. Duration: 2 hours

September 4, 1980 System: LPCI

The LPCI/CCSW (2-1503B) heat exchanger was found to have tube leakage. Corrective Action: The leaking tubes were plugged. Duration: 133 hours

December 15, 1980 System: LPCI

During a Hydrostatic test of the 2-1503B LPCI/CCSW heat exchanger, 4 tubes were found to be leaking. Corrective Action: Plugged the leaking tubes. Duration: 48 hours

May 12, 1980 System: HPCI

Motor Operated Valve 2-2301-4 would not close. Investigation showed the valve had a packing leak which created an excessive moisture condition for the motor. Corrective Action: Repacked valve and dried out motor. Duration: 125 hours

February 13, 1980

System: LPCI

Motor Operated Valve 3-1501-11B failed to close. Investigation showed a stripped screw in a terminal in the Motor Control Center. Corrective Action: Replaced screw - completed a complete inspection of the breaker.

Duration: 24 hours

August 18, 1980

System: LPCI

During operation for torus cooling, the 2-1502-2A LPCI pump mechanical seal was found to be leaking. Corrective Action: Replaced mechanical seal.

Duration: 70 hours

January 28, 1980

System: Core Spray

The Core Spray Discharge Line Relief Valve 3B subsystem was found to be leaking through. Corrective Action: The valve was removed, cleaned, lift checked, and reinstalled.

Duration: 15 hours

PART II

Quad Cities Station Response

Attached are the revised ECCS Outage Reports for Quad-Cities Station for the time period of January 1, 1975 through November 30, 1980. These reports contain additional information, as requested by the NRC in Reference (a).

The diesel generator outages listed did not affect the availability of the ECCS equipment associated with that diesel generator, since offsite auxiliary power was available. The tables involving the ECCS equipment include maintenance which affected the availability of the system. ECCS equipment is not rendered inoperable during routine surveillance testing, since the systems will automatically shift to their emergency line-up should an initiation signal occur during the surveillance testing.

FORM A

ECC SYSTEM OUTAGE REPORT

UTILITY COMMONWEALTH EDISON

PLANT QUAD CITIES STATION

UNIT 1

DATE OF COMMERCIAL OPERATION 4-12-72

REPORT COVERS PERIOD 1-1-75 THROUGH 11-30-80

NUMBER OF DAYS OF COLD SHUTDOWN DURING REPORT PERIOD 409.53

FORMS B COMPLETED FOR FOLLOWING SYSTEMS:

- HPCI
- FWCI
- ISOLATION CONDENSER (one subsystem)
- RCIC
- CORE SPRAY (one subsystem)
- LPCI (one pump)
- ADS (one valve)
- RHR/CONTAINMENT COOLING (one subsystem)
- RHR SERVICE WATER (one subsystem)
- ONSITE EMERGENCY POWER (one subsystem)
- OTHER (specify) \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

DATE 12-1-80 BY JESSEN



## ECC SYSTEM OUTAGE REPORT

PLANT QUAD-CITIES UNIT ONE SYSTEM RHR PAGE 1 OF 1ALLOWABLE OUTAGE TIME FOR SYSTEM 30 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
1-20-75	.04	Tightened packing - 1A RHR SW pump
11-21-75	.08	New switch in magnetrol
2-24-76	.16	Installed new trip linkage
10-29-76	.04	Replaced alarm microswitch
2-24-79	.12	Replaced logic timer drive motor
2-16-79	.08	Welded vent line
10-7-80	.04	Welded "T" in drain line
10-24-80	2.0	Modified RHR line
10-21-80	3.0	Installed service water isolation valve

## ECC SYSTEM OUTAGE REPORT

PLANT QUAD-CITIES UNIT ONE SYSTEM HPCI PAGE 1 OF 1ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
5-8-75	.29	Repaired motor speed changer
8-1-75	.2	Replaced magnetrol switches
3-4-76	.16	Replaced relay
3-25-77	.29	Replaced drain valve
5-5-77	.33	Repaired gland seal
5-11-77	1.0	Replaced section of pipe
5-14-77	.5	Replaced section of pipe
6-1-77	.2	Repaired turning gear
6-21-77	.5	Replaced section of pipe
9-9-77	.16	Repacked MSL valve
12-13-77	1.0	Replaced section of pipe
7-11-78	.12	Repaired switch
9-18-78	.2	Replaced broken stud
1-23-79	.12	Pack valve
2-6-79	4.0	New drain line
2-22-79	.16	Repaired valve
12-15-79	.12	Repack valve

## ECC SYSTEM OUTAGE REPORT

PLANT QUAD-CITIES UNIT ONE SYSTEM CORE SPRAY PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
1-6-76	.16	Replaced packing
10-12-77	.04	Motor bearing oil plug replaced
12-2-80	2.0	Replaced 105° radius bend
2-21-80	1.0	Welded caps on safe-end stubs
4-10-80	2.0	Replaced section of pipe
4-17-80	.5	Repaired switch

## ECC SYSTEM OUTAGE REPORT

PLANT QUAD-CITIES UNIT 1/2 SYSTEM DIESEL PAGE 1 OF 1ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
5-16-75	.16	Changed rectifiers
6-27-77	.04	Checked coupling
8-16-79	.08	Repaired fuel line
4-10-80	.12	Replaced heater on soak back pump
6-24-80	.12	Replaced submersion heater
5-16-75	.16	Replaced rectifiers
5-7-77	.04	Installed new fuel line
12-30-77	.12	Replaced diaphragm
12-30-77	.08	Replaced valve
2-4-78	.16	Recalibrate all protective relays
1-27-78	.04	Replaced CR10 and CR11
2-16-78	.12	Recalibrate underfrequency relays
1-27-78	.12	Replaced rectifier
12-8-78	.08	Repaired pressure switch
1-31-79	.08	Cleaned air start valve
3-22-79	.25	Replaced starter motor
9-7-79	.12	Installed new motor on oil pump
10-31-79	.16	Replaced governor
11-10-79	.04	Replaced fuel filter
2-6-80	.12	Calibrate protective relays
2-6-80	.08	Installed air regulator
3-13-80	.16	Repaired oil filter housing
2-6-80	.12	Installed check valve
5-8-80	.08	Installed new fuel filter
8-22-80	.12	Replaced solenoid valve
9-9-80	.04	Replaced fuel filter
12-9-80	.04	Replaced fuel filter
1-1-75 thru 11-30-80	5.91 days	Routine maintenance at 2 hr per month

## ECC SYSTEM OUTAGE REPORT

PLANT QUAD-CITIES UNIT ONE SYSTEM DIESEL PAGE 1 OF 1ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
1-13-76	.16	Cleaned and repaired air motors
4-15-77	.4	Replaced #3 cylinder head
4-28-77	.2	Installed 2 suppression rectifiers
8-24-77	.12	Refastened loose tachometer
5-6-77	.2	Replaced coils
2-16-78	.2	Recalibrate underfrequency relays
2-11-78	.16	Replaced rectifier
1-26-79	.29	Replaced oil pump
1-30-79	.25	Replaced regulator
2-20-79	.12	Adjusted relay timing
8-28-79	.08	Installed new strainer
12-16-79	.12	Repaired oil pump
5-16-75	.16	Changed rectifiers
10-3-76	1.4	Replaced intake and exhaust valves
3-19-77	.2	Replaced oil seal
5-6-77	.12	Changed fuel oil line
6-15-77	.08	Replaced air comp relief valve
8-18-78	.16	Aligned soak back pump
1-30-79	.2	Repaired lube oil pump
9-19-79	.2	Repaired circ oil pump
9-10-80	.16	Replaced oil seal on oil pump
9-11-80	.08	Replaced gasket and hose
9-15-80	.29	Repaired heat exchanger
10-3-80	.16	Cleaned and inspected day tank switches
10-9-80	1.33	Replaced heat exchanger
10-18-80	.2	Calibrate protective relays
9-15-80	.2	Installed check valve
11-20-80	.25	Provided trip to DIG 4KV breaker
1-1-75 thru 11-30-80	5.91 days	Routine maintenance at 2 hr per month

## ECC SYSTEM OUTAGE REPORT

PLANT QUAD-CITIES UNIT ONE SYSTEM RCIC PAGE 1 OF 1ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
7-25-75	.08	Repacked valve
7-25-75	.08	Replaced gasket on sight glass
1-9-76	.33	Replaced overspeed trip
3-13-76	.08	Adjusted ball tappet
2-4-78	.29	Replaced oil trip mechanism
6-5-78	.12	Replaced switch on vacuum pump
8-31-78	.25	Repaired overspeed trip
4-28-79	.16	Repaired trip valve
12-15-79	.2	Repacked vacuum pump
12-20-80	.08	Adjusted overspeed trip device
12-22-80	.12	Adjusted limit switch

FORM B

ECC SYSTEM OUTAGE REPORT

PLANT COMMONWEALTH EDISON  
QUAD CITIES STA. UNIT 1 SYSTEM ADS PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
11-1-76	2.0	ELECTROMATIC FAILURE
11-16-77	1.0	ELECTROMATIC FAILURE
5-15-79	1.0	PRESSURE SWITCH FAILURE
9-14-79	3.0	MICRO SWITCH FAILURE
5-12-80	.5	ELECTROMATIC FAILURE

FORM B

ECC SYSTEM OUTAGE REPORT

PLANT COMMONWEALTH EDISON  
QUAD CITIES STA UNIT 1 SYSTEM BATTERY PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 3 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
9-24-77	1.0	REPLACE CELLS



ECC SYSTEM OUTAGE REPORT

COMMONWEALTH EDISON PLANT QUAD CITIES STA. UNIT 1 SYSTEM RGIC PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

OUTAGE DATE	DURATION OF OUTAGE (DAYS)	CAUSE
1-6-75	0.5	VALVE FAILURE
6-21-75	0.06	VALVE FAILURE
10-29-76	13.0	PUMP OVERHAUL
2-6-78	0.3	VALVE FAILURE
5-5-78	0.5	THROTTLE FAILURE
8-29-78	2.0	OIL TRIP MODIFICATION
1-6-79	0.3	MICRO SWITCH FAILURE
1-7-79	0.3	VALVE FAILURE
2-22-80	1.5	VALVE FAILURE
7-8-80	1.5	VALVE FAILURE
8-18-80	1.5	CONTROL FAILURE

FORM B

ECC SYSTEM OUTAGE REPORT

PLANT COMMONWEALTH EDISON  
QUAD CITIES STA. UNIT 1 SYSTEM LPCI PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
8-2-75	0.5	VALVE FAILURE
4-10-80	.1	BREAKER FAILURE

ECC SYSTEM OUTAGE REPORT

COMMONWEALTH EDISON  
PLANT QUAD CITIES STA. UNIT 1 SYSTEM DIESEL GEN. PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
2-28-75	9.0	OIL SAMPLE FAILURE
12-2-76	0.2	SERVICE WATER FAILURE

## ECC SYSTEM OUTAGE REPORT

PLANT COMMONWEALTH EDISON  
QUAD CITIES STA. UNIT 1/2 SYSTEM DIESEL GEN. PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
1-16-75	4.0	FAIL TO START
3-17-76	0.003	ROUTINE MAINT.
7-27-76	0.04	ROUTINE MAINT.
11-28-77	0.2	FAIL TO START
12-27-77	0.02	ROUTINE MAINT.
1-23-79	10.0	FAIL TO START
10-25-79	1.0	WILL NOT LOAD
3-8-80	0.04	FUSE HOLDER
10-10-80	1.0	COOLING WATER PUMP FAILURE

ECC SYSTEM OUTAGE REPORT

COMMONWEALTH EDISON  
PLANT QUAD CITIES STA. UNIT 1 SYSTEM CORE SPRAY PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
2-3-77	0.5	VALVE FAILURE
6-7-77	0.04	DOOR FAILURE
4-29-80	.04	MCC TRIP

## ECC SYSTEM OUTAGE REPORT

COMMONWEALTH EDISON  
PLANT QUAD CITIES STA. UNIT 1 SYSTEM HPCI PAGE 1 OF 1ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
6-17-76	0.5	MOTOR SPEED CHANGER FAILED
6-11-77	1.0	VALVE FAILURE
11-18-77	0.1	VALVE FAILURE
8-1-78	4.0	INST. FAILURE
8-13-79	1.0	INST. FAILURE

ECC SYSTEM OUTAGE REPORT

COMMONWEALTH EDISON

PLANT QUAD CITIES STA. UNIT 1 SYSTEM RHRS PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 30 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
5-15-75	0.3	VALVE FAILURE
7-1-76	0.3	BREAKER FAILURE
9-2-76	0.5	BREAKER FAILURE
5-2-79	7.0	VALVE FAILURE
11-9-79	6.0	RESTRAINT SAFETY FACTOR < 2.0
2-6-80	1.0	VALVE FAILURE

ECC SYSTEM OUTAGE REPORT

COMMONWEALTH EDISON

RHRS

PLANT QUAD CITIES STA. UNIT 1 SYSTEM SVC. WATER PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 30 DAY

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
4-16-79	19.0	PUMP OVERHAUL
8-20-79	25.0	PUMP OVERHAUL
10-2-79	20.0	PUMP OVERHAUL



FORM A

ECC SYSTEM OUTAGE REPORT

UTILITY COMMONWEALTH EDISON

PLANT QUAD CITIES STATION

UNIT 2

DATE OF COMMERCIAL OPERATION 5-23-72

REPORT COVERS PERIOD 12-1-74 THROUGH 11-30-80

NUMBER OF DAYS OF COLD SHUTDOWN DURING REPORT PERIOD 622.73

FORMS B COMPLETED FOR FOLLOWING SYSTEMS:

- HPCI
- FWCI
- ISOLATION CONDENSER (one subsystem)
- RCIC
- CORE SPRAY (one subsystem)
- LPCI (one pump)
- ADS (one valve)
- RHR/CONTAINMENT COOLING (one subsystem)
- RHR SERVICE WATER (one subsystem)
- ONSITE EMERGENCY POWER (one subsystem)
- OTHER (specify) \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

DATE 12-1-80 BY JESSEN

## ECC SYSTEM OUTAGE REPORT

PLANT QUAD-CITIES UNIT TWO SYSTEM DIESEL PAGE 1 OF 1ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
5-16-75	.16	Changed rectifiers
1-27-75	.12	Burnished contacts on overspeed relay
2-13-75	.08	Replaced starting motor
10-24-75	.12	Welded saddle to pedestal
4-11-75	.16	Replaced rectifier units
5-20-75	.33	Replaced drive unit on starting motor
11-3-75	.25	Replaced 6 rectifiers
6-26-76	.04	Replaced broken socket on Bus 24-1
10-5-76	.08	Replaced valve
7-27-77	.08	Installed new solenoid valve
10-7-76	.16	Recalibrated protective relays
1-25-78	.2	Replaced rectifiers
8-18-78	.12	Re-aligned oil pump
2-22-80	.12	Replaced soak back motor
2-16-78	.16	Calibrate relays
2-24-78	.33	Replaced Bendix starter
3-9-78	.08	Replaced soak back motor
12-8-79	.08	Replaced strainer
2-6-80	.16	Recalibrated protective relays
12-1-74 thru 11-30-80	6 days	Routine maintenance at 2-hr month

## ECC SYSTEM OUTAGE REPORT

PLANT QUAD-CITIES UNIT TWO SYSTEM HPCI PAGE 1 OF 1ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
4-11-75	.25	Repair control switch
4-20-75	.16	Repacked vent valve
7-23-75	.25	Repacked valve
8-1-75	.25	New oil filter
8-15-75	.2	Repack stop valve
2-8-76	.16	Repack valve
2-24-77	.29	Replace gasket on steam supply
3-21-77	.33	Cleared electrical ground
2-13-78	.25	Repaired relay
5-19-78	.16	Repacked valve
6-14-78	.25	Repaired linkage
8-3-78	.29	Repaired oil cooler inlet reg valve
9-30-78	.29	Repaired linkage arm
2-11-79	2.0	Replaced section of line
2-23-80	3.0	Replaced section of line
4-18-80	.29	Replaced overload device
4-22-80	.33	Repaired lube oil pump
6-4-80	.29	Installed test tap
11-18-80	.33	Adjusted turning gear
12-13-80	.2	Adjusted turning gear

## ECC SYSTEM OUTAGE REPORT

PLANT QUAD-CITIES UNIT TWO SYSTEM RHR PAGE 1 OF 1ALLOWABLE OUTAGE TIME FOR SYSTEM 30 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
1-5-75	.33	Replaced valve stem and packing
11-4-75	.16	Changed sight glass on 2B HX
10-12-76	.04	Inspected valve
5-30-78	.25	Installed high point vent
9-20-79	.16	Repaired breaker for SW pumps
2-8-80	.08	Repaired HX vent line
3-3-80	.04	Adjusted micro switch
3-5-80	.04	Adjusted timer clutch
3-9-80	.16	Installed new vent line
11-17-80	.16	Welded valve on drain line

ECC SYSTEM OUTAGE REPORT

PLANT QUAD-CITIES UNIT TWO SYSTEM RCIC PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
8-15-75	.12	Repacked valve
8-16-75	.12	Repacked valve
9-3-75	.2	Repaired overspeed trip
10-10-75	.25	Replaced gasket
10-14-76	.29	Repaired steam exhaust check valve
10-23-76	.33	Installed new valve
4-19-77	.12	Repaired governor
5-20-77	.25	Repaired remote trip
1-30-78	.12	Steam exhaust vacuum breakers

## ECC SYSTEM OUTAGE REPORT

COMMONWEALTH EDISON  
 PLANT QUAD CITIES STA. UNIT 2 SYSTEM HPCI PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 7.DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
1-28-77	0.3	STOP VALVE FAILURE
3-17-77	0.01	VALVE FAILURE
6-20-77	0.2	MOTOR GEAR UNIT FAILURE
5-25-78	0.5	MOTOR SPEED CHANGER FAILURE
8-10-78	0.01	TEMP. SENSOR FAILURE
12-18-78	0.01	PRESSURE SWITCH TEST FAILURE
8-15-79	0.3	TEMP. SENSOR FAILURE
6-4-80	0.3	STEAM LEAK
6-23-80	0.02	OIL LEAK
8-29-80	0.08	MOTOR GEAR UNIT FAILURE
11-16-80	0.16	OIL LEAK

## ECC SYSTEM OUTAGE REPORT

PLANT COMMONWEALTH EDISON  
QUAD CITIES STA. UNIT 2 SYSTEM RCIC PAGE 1 OF 1ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
5-19-77	0.5	VALVE FAILURE
1-11-78	4.0	PUMP OVERHAUL
4-9-78	0.5	VALVE FAILURE
5-10-78	1.0	VALVE FAILURE
7-28-78	0.5	VALVE FAILURE
10-17-80	0.16	VALVE FAILURE
11-16-80	0.4	VALVE FAILURE

## ECC SYSTEM OUTAGE REPORT

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QUAD CITIES STA. UNIT 2 SYSTEM RHRS PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 30 DAYS

OUTAGE DATE	DURATION OF OUTAGE (DAYS)	CAUSE
6-19-76	0.25	VALVE FAILURE
1-3-77	1.0	SUSPECT HX TUBE LEAK
7-19-77	0.003	VALVE CLOSED
5-24-78	0.5	PRESSURE SWITCH FAILURE
1-19-79	11.0	VALVE FAILURE
7-12-79	0.2	BREAKER FAILURE
9-20-79	0.5	SNUBBER LOW OIL
10-26-79	0.3	BREAKER FAILURE
10-24-80	0.04	VALVE FAILURE



FORM B

ECC SYSTEM OUTAGE REPORT

PLANT COMMONWEALTH EDISON  
QUAD CITIES STA. UNIT 2 SYSTEM DIESEL GEN PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
8-10-77	2.0	COOLING WATER LEAK

FORM B

ECC SYSTEM OUTAGE REPORT

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PLANT QUAD CITIES STA. UNIT 2 SYSTEM CORE SPRAY PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
1-29-76	0.3	PRESSURE SWITCH FAILURE
4-27-76	0.3	PRESSURE SWITCH FAILURE
11-14-77	3.0	VALVE FAILURE
5-21-78	0.003	SWITCH OFF
10-16-78	0.3	SWITCH FAILURE

DATE 12-1-80 BY JESSEN

ECC SYSTEM OUTAGE REPORT

PLANT COMMONWEALTH EDISON  
QUAD CITIES STA. UNIT 2 SYSTEM LPCI PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
4-4-78	0.5	VALVE FAILURE
4-28-80	0.4	VALVE FAILURE
10-10-80	0.01	VALVE FAILURE
10-10-80	0.04	LIMIT SWITCH FAILURE

FORM B

ECC SYSTEM OUTAGE REPORT

COMMONWEALTH EDISON RHR  
PLANT QUAD CITIES STA. UNIT 2 SYSTEM S.V.C. WATER PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 30 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
8-24-77	0.04	BREAKER FAILURE
5-15-79	21.0	PUMP OVERHAUL
6-1-79	0.04	VALVE FAILURE
6-11-79	25.0	PUMP OVERHAUL

FORM B

ECC SYSTEM OUTAGE REPORT

COMMONWEALTH EDISON

PLANT QUAD CITIES STA. UNIT 2 SYSTEM ADS PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 7 DAYS

<u>OUTAGE DATE</u>	<u>DURATION OF OUTAGE (DAYS)</u>	<u>CAUSE</u>
3-23-77	4.0	ELECTROMATIC FAILURE
9-23-77	1.0	INST. FAILURE
1-4-78	1.0	INST. FAILURE
4-18-78	0.5	INST. FAILURE
10-17-80	0.04	ELECTROMATIC FAILURE

FORM B

ECC SYSTEM OUTAGE REPORT

PLANT COMMON WEALTH EDISON  
QUAD CITIES STA. UNIT 2 SYSTEM BATTERIES PAGE 1 OF 1

ALLOWABLE OUTAGE TIME FOR SYSTEM 3 DAYS

OUTAGE  
DATE

DURATION OF  
OUTAGE (DAYS)

CAUSE

- NONE -