



# Telegram

VEE147(1316)(1-015001C283)PD 10/10/73 1315

ICS IPMVEIA MVN

01126 TDVE MORRIS IL 71 10-10 1148A CDT

PMS JAMES G KEPPLER DIR DIVI OF COMPLIANCE REGION 3

US ATOMIC ENERGY COMM 799 ROOSEVELT RD

GLEN ELLYN IL 60137

SUBJECT DPR-25 DRESDEN NUCLEAR POWER STATION UNIT 3

THIS WILL CONFIRM A CONVERSATION WITH MR. FRED MAURA OF YOUR  
OFFICE AT 1100 HOURS THIS DATE CONCERNING A BREAKER TRIP OF MOTOR  
OPERATED VALVE M03-1301-1 FOLLOWING ROUTINE MONTHLY ISOLATION CENSOR  
CHECK THE FEED BREAKER FOR M03-1301-1 TRIPPED WHEN THE OPERATOR  
ATTEMPTED TO REOPEN THE VALVE THE BREAKER WAS RESET AND THE VALVE  
THEN OPERATED SATISFACTORILY

W P WORDEN SUPERINTENDENT DRESDEN NUCLEAR POWER STATION  
COMMONWEALTH EDISON CO ROUTE 1 MORRIS ILL

OCT 12 1973

8310200377 731018  
PDR ADOCK 05000249  
S PDR

1973 OCT 10

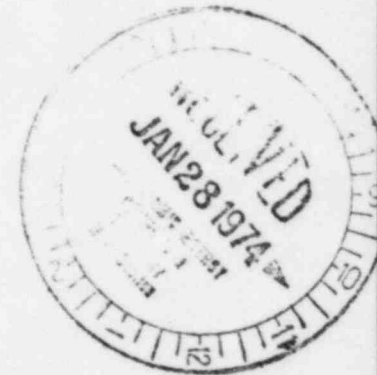
TELEGRAM (OTHER THAN MONEY ORDERS)  
Is PHYSICAL DELIVERY requested? (YES-AGENT, NO-NONE)  
AGENT SECTION ADDRESS SECTION  
Nbr. & name 312-858-4460  
Date 10-10-73  
To be delivered by mail  
Attempts to deliver (indicate LA or BY)



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

WPW Ltr #53-74

Dresden Nuclear Power Station  
R. R. #1  
Morris, Illinois 60450  
January 23, 1974



Mr. J. F. O'Leary, Director  
Directorate of Licensing  
U. S. Atomic Energy Commission  
Washington, D. C. 20545

SUBJECT: INSPECTION OF BERGEN-PATERSON HYDRAULIC SHOCK  
SUPPRESSORS AT DRESDEN NUCLEAR POWER STATION  
UNIT #3, AEC DKT 50-249

- References: 1) Letter from Mr. D. J. Skovholt to Mr. J. S. Abel  
dated October 1, 1973
- 2) Letter from Mr. W. P. Worden to Mr. A. Giambusso  
dated August 16, 1973

Dear Mr. O'Leary:

This letter is to report information concerning the station's third inspection of Bergen-Paterson hydraulic shock suppressors on Unit #3. The unit was shutdown on January 17, 78 days after the previous snubber inspection outage, to repair electromatic relief valve 3-203-3A and to effect repairs to the HPCI system. Because the reactor was shutdown for longer than 24 hours, a snubber inspection was performed as required by Reference (1).

The inspection revealed that all 43 Bergen-Paterson snubbers on Unit #3 were operable, and exhibited overall integrity. There were eight (8) snubbers in the drywell that had low oil level indication on the accumulator. In addition, torus snubber #73 had slightly low oil level indication on the accumulator. It is believed that the low oil level is due to small leaks, but because the leakage is small there is no evidence of fluid leaks or loss of overall integrity. All nine of these snubbers had satisfactory oil level during the previous inspection. The attached lists contain piston rod extensions and fluid level indicator positions found during this inspection.

Eleven Grinnell snubbers, located in the turbine and isolation condenser pipeways, were inspected to supplement the above described inspection. All were operable, but one of the Grinnell snubbers had low oil indication. All ten (10) snubbers mentioned in this report as exhibiting low oil level were filled prior to resuming power operation.

*Dupe of*

*8310200440*

COPY SENT REGION *III*

Mr. J. F. O'Leary, Director

- 2 -

January 23, 1974

The failed snubber support, which was found and repaired during the initial inspection, was examined on January 8 utilizing ultrasonic and dye penetrant testing techniques. See Reference (2). No indications of a faulty weld were detected.

Sincerely,

*WP Worden AR*

W. P. Worden  
Superintendent

WPW:ls

<u>Station I.D.</u>	<u>Piston Rod Position (in.)</u>	<u>Fluid Level Indicated Position (in.)</u>
T2	3 1/8	3 1/2
T3	3 1/8	4 (low)
T4	3 1/4	3 1/4
T5	3 1/8	3 1/2
T7	2 3/4	2 3/4
T8	3	3 1/4
T9	3	3 1/4
T10	3 1/4	3 1/4
T12	3	3 1/4
T13	3	3 1/4
T15	3	3 1/4
T16	3 1/8	3 1/2

Snubbers in Drywell

<u>Station I.D.</u>	<u>Piston Rod Position (in.)</u>	<u>Fluid Level Indicated Position (in.)</u>
1	3.00	3.00
2	3.00	4.00 (low)
3	3.00	3.00
4	3.00	1.00
5	3.00	3.00
6	3.00	2.50
7	3.50	4.00
8	3.50	6.00 (low)
9	4.50	4.50
10	3.00	3.33
11	3.50	3.50
12	4.50	4.00
13	3.50	3.50
14	4.00	4.00
15	3.50	3.50
16	4.00	3.50
17	2.50	2.50
18	3.00	3.00
19	3.50	6.00 (low)
20	3.50	3.50
21	2.12	3.50 (low)
22	3.38	6.00 (low)
23	2.75	6.00 (low)
24	2.75	3.25
25	3.50	3.75
26	3.00	3.50
27	1.75	1.50
28	2.25	6.00 (low)
29	2.75	1.75
30	2.25	2.00
31	3.25	4.00 (low)



UNITED STATES  
ATOMIC ENERGY COMMISSION  
WASHINGTON, D.C. 20545

Docket Nos, 50-237, 50-249,  
50-254, and 50-265

Commonwealth Edison Company  
ATTN: Mr. J. S. Abel  
Nuclear Licensing Administrator -  
Boiling Water Reactors  
Post Office Box 767  
Chicago, Illinois 60690

Gentlemen:

Inspections of hydraulic shock suppressors (snubbers) as required by RO Bulletin 73-3 revealed that a large percentage of the seals in Bergen-Patterson units were defective. Reinspections in compliance with RO Bulletin 73-4 indicated that defects can recur in six weeks' time or less.

Two different seal materials have been used in Bergen-Patterson snubbers; a millable gum polyurethane which contains plasticizers and other additives and a molded polyurethane known to be free of these additives. It has been postulated that dissolving of the plasticizer into the silicone hydraulic fluid has caused seal shrinkage and deterioration. Therefore, millable gum polyurethane should not be used in hydraulic snubbers, except on an emergency basis.

The performance and reliability of unadulterated molded polyurethane in a reactor environment has not yet been established. Test data indicate that an incompatibility exists between molded polyurethane and the silicone fluid which may limit the inservice life of the molded material. The use of molded polyurethane seals should, therefore, be considered an interim repair until more data is available or an improved material is established.

Based on the above considerations, we require the following action be taken on all Bergen-Patterson snubbers installed on safety related systems after the shutdown required by RO Bulletin 73-4.

1. Snubbers Inaccessible During Reactor Operation

During the shutdown required by RO Bulletin 73-4, replace seal material in all snubbers inaccessible during reactor operation with material demonstrated to be compatible with the hydraulic

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OCT 1 1973

fluid at the operating environment. (If such material is unavailable, the use of molded polyurethane known to be free of additives will be acceptable as an interim repair.) Reinspect these snubbers whenever the reactor is shutdown for 24 hours or longer and snubbers have not been inspected for 30 days, but in no event should the interval between inspections exceed 120 days. Repair defective units before returning to power operation. If unavailability of materials prevents the changeout of all inaccessible snubbers or dictates repairs with millable gum seals, only defective units need be repaired. Under these conditions, reinspect every 30 days until improved seal material is installed which should be accomplished at the earliest practical time.

2. Snubbers Accessible During Reactor Operation

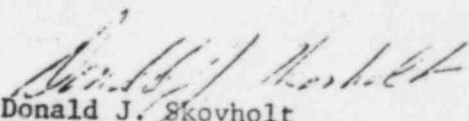
Repair defective snubbers accessible during reactor operation as outlined in 1. above. Reinspect accessible snubbers every 30 days or less and repair defective units as needed.

During the required surveillance, inspect snubbers supplied by manufacturers other than Bergen-Patterson. Report the results of the inspections and corrective action taken to the Directorate of Licensing within 15 days after the inspection. This report should include for each manufacturer the number of snubbers inspected, identification of defective units, and corrective action taken, including specific description of materials used in your repair.

Bergen-Patterson is coordinating a development program to determine a long-term solution to the current snubber problem. Based on the results of this program, the results of your reinspections, and any other pertinent information available, submit to the Directorate of Licensing at an appropriate time, but within one year, your proposed program to improve snubber service life and reliability and proposed changes to your Technical Specifications describing a snubber surveillance program with basis.

We also request that you submit to us within 60 days after your next shutdown information describing snubber temperature and radiation environment at full power.

Sincerely,

  
Donald J. Skovholt  
Assistant Director for  
Operating Reactors  
Directorate of Licensing

cc: See next page

cc: Mr. Charles Whitmore  
President and Chairman  
Iowa-Illinois Gas and  
Electric Company  
206 East Second Avenue  
Davenport, Iowa 52801

John W. Rowe, Esquire  
Isham, Lincoln & Beale  
Counselors at Law  
One First National Plaza  
Chicago, Illinois 60670

Morris Public Library  
604 Liberty Street  
Morris, Illinois 60451

Moline Public Library  
504 - 17th Street  
Moline, Illinois 61265





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

August 29, 1973

Mr. Boyce H. Grier  
Regional Director  
Directorate of Regulatory  
Operations - Region III  
U.S. Atomic Energy Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Subject: Dresden, Quad-Cities and Zion Stations  
Hydraulic Shock Absorbers

Dear Mr. Grier:

In response to your letter of August 17, 1973, the following program for reinspection of Bergen-Patterson hydraulic shock absorbers installed on safety-related systems is provided. The reinspections are scheduled to be performed on approximately the following schedules.

<u>Unit</u>	<u>Unit Returned To Service</u>	<u>Date Scheduled For Reinspection</u>
Quad-Cities 1	8- 6-73	9-21-73
Quad-Cities 2	8- 5-73	10-10-73
Dresden 2	8-13-73	10- 3-73
Dresden 3	8-10-73	10-17-73
Zion	7-27-73	9-22-73

Reinspection will be conducted by each station in accordance with Directorate of Regulatory Operations Bulletin 73-4, dated August 17, 1973. Specifically, the inspection will include the following:

- a. Determination of condition of seals - this will be accomplished by visual inspection of each hydraulic shock absorber for signs of leakage, change in fluid indicator position, etc. Absence of any indication of degradation provides assurance that the seals are functioning properly. Additionally, one shock absorber on each unit at Dresden and Quad-Cities selected from

Dupe  
88-10170709

50-249 inquiry

Mr. Boyce H. Grier

- 2 -

August 29, 1973

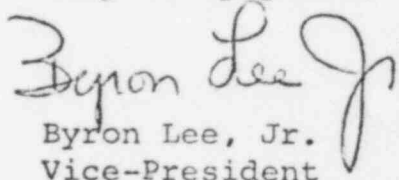
one of the hotter locations in the containment, will be completely disassembled and inspected for signs of deterioration of the seal material.

- b. Verification of overall integrity of shock absorber assemblies - this will be accomplished by visual inspection.
- c. Examination for loss of fluid, fluid leaks and other signs of distress - this will be accomplished by visual inspection.
- d. Recording of piston rod extension and fluid level indicator position.

Reporting of the results of these reinspections will be in accordance with Item 4 and Item 5 of your August 17, 1973 Directorate of Regulatory Operations Bulletin 73-4.

If you have any further questions or comments please contact me.

Very truly yours,

  
Byron Lee, Jr.  
Vice-President



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

August 27, 1973

Mr. Boyce H. Grier  
Regional Director  
Directorate of Regulatory  
Operations - Region III  
U.S. Atomic Energy Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Subject: Updated Report on Inspection of Bergen-  
Patterson Shock Suppressors and Restraints  
at the Dresden, Quad-Cities and Zion Nuclear  
Generating Stations, AEC Dkts 50-10, 50-237,  
50-249, 50-254, 50-295 and 50-304

Dear Mr. Grier:

On July 27, 1973, you requested inspection of Bergen-Patterson shock suppressors and restraints in use at Commonwealth Edison's nuclear generating stations. My letter of August 6, 1973 summarized the results of the inspections as of that date. This letter revises and expands the data contained in the August 6 letter based upon more detailed examination of the "snubbers". Minor errors in the previous tabulation are also corrected.

There are no Bergen-Patterson "snubbers" in use at Dresden Unit 1. Of the total of seven (7) "snubbers" furnished by others, five have been inspected and found to be operable. The other two will be inspected during the refueling outage scheduled to begin in mid-September, 1973.

Dresden Units 2 and 3 each utilize forty-three (43) Bergen-Patterson "snubbers" on safety-related systems. A total of twenty-eight (28) on Unit 2 and twenty-nine (29) on Unit 3 were found to be inoperable due to loss of fluid resulting from seal failures. The inoperable units were all located inside the drywell. To avoid releasing more oil in the drywell and to expedite repairs the units were rebuilt without determining specifically which seals on each unit were failed.

Dupe  
8010170712

Commonwealth Edison Company

Mr. Boyce H. Grier

- 2 -

August 27, 1973

The previous report listed eleven "snubbers" on each unit which were not manufactured by Bergen-Patterson. It has been determined that eight out of the eleven are not installed on safety-related systems. Of the remaining three per unit, none were found to be inoperable.

There are twenty-nine (29) Bergen-Patterson "snubbers" on each of the two Quad-Cities units. It has been determined that twenty-five (25) of those on Unit 1 and twenty (20) on Unit 2 were inoperable as a result of seal failures. All the "snubbers" are tabulated in the attachment to this letter. Specific seal failures on each "snubber" were not identified. Unit 1 safety-related systems utilize eighteen (18) "snubbers" made by other manufacturers. Two were inoperable but neither failure was related to seal deterioration. A Grinnel model G 5 x 5 (bore x stroke), serial No. 4451, on the main steam piping outside the containment had a broken oil line with resultant fluid loss. A Grinnel model G 3-3/4 x 5, serial No. 4443, outside the containment on the feedwater piping had a loose connection and had lost its oil. Unit 2 has twenty (20) non-Bergen-Patterson "snubbers" including four (4) which were not included in the previous report. All except one were found to be operable. A Grinnel model G 5 x 5, serial No. 4694, on the main steam piping outside the containment had a loose tubing connection with resulting oil loss.

It has been determined that the safety-related systems on Zion Unit 1 contain sixteen (16) Bergen-Patterson "snubbers" and a total of 503 others. All were checked during hot functional testing early this year. The Bergen-Patterson units were reinspected on July 27, 1973 and found to be satisfactory in all respects. Of the 503 others, all but 136 have been inspected and found to be operable. It is planned to complete the inspection of the others before proceeding above 50% power.

Defective "snubbers" identified during these inspections were repaired prior to resumption of operation.

Very truly yours,

*Byron Lee Jr.*  
Byron Lee, Jr.  
Vice President

DRESDEN FAILED BERGEN-PATTE "SNUBBERS"

DRESDEN 2

System	Size Stroke x Bore	Model No.	Serial No.
HPCI	6" x 2-1/2"	HSSA-10	487511
	6" x 2-1/2"	HSSA-10	487556
	6" x 2-1/2"	HSSA-10	487560
LPCI	6" x 2-1/2"	HSSA-10	487508
	6" x 2-1/2"	HSSA-10	487541
Core Spray	6" x 2-1/2"	HSSA-10	487567
	6" x 2-1/2"	HSSA-10	487533
Feedwater	6" x 2-1/2"	HSSA-10	487500
	6" x 2-1/2"	HSSA-10	487539
Cleanup	6" x 2-1/2"	HSSA-10	487570
	6" x 2-1/2"	HSSA-10	487553
Recirculation	6" x 2-1/2"	HSSA-10	487575
	6" x 2-1/2"	HSSA-10	487572
	6" x 4"	HSSA-10	487544
	6" x 4"	HSSA-30	487545
	6" x 4"	HSSA-30	487769
	6" x 4"	HSSA-30	487776
	6" x 4"	HSSA-30	487759
	6" x 4"	HSSA-30	487781
	6" x 4"	HSSA-30	488788
	6" x 4"	HSSA-30	487757
	6" x 4"	HSSA-30	487762
	6" x 4"	HSSA-30	487814
	6" x 3-1/4"	HSSA-30	487758
	6" x 3-1/4"	HSSA-20	487616
	6" x 2-1/2"	HSSA-20	487617
	6" x 2-1/2"	HSSA-10	482597
		HSSA-10	482596

DRESDEN 3

HPCI	6" x 2-1/2"	HSSA-10	51035
	6" x 2-1/2"	HSSA-10	51035
	6" x 2-1/2"	HSSA-10	51035
LPCI	6" x 2-1/2"	HSSA-10	51035
	6" x 2-1/2"	HSSA-10	F51035
Core Spray	6" x 2-1/2"	HSSA-10	51035
	6" x 2-1/2"	HSSA-10	51035
Cleanup	6" x 2-1/2"	HSSA-10	F51035
	6" x 2-1/2"	HSSA-10	51035
	6" x 2-1/2"	HSSA-10	51035
Feedwater	6" x 2-1/2"	HSSA-10	F51035
	6" x 2-1/2"	HSSA-10	F51035
	6" x 2-1/2"	HSSA-10	F51035
Recirculation	6" x 2-1/2"	HSSA-10	51035
	6" x 4"	HSSA-10	F51035
	6" x 4"	HSSA-30	F51035
	6" x 4"	HSSA-30	Missing
	6" x 4"	HSSA-30	Illegible
	6" x 4"	HSSA-30	487785
	6" x 4"	HSSA-30	42781
	6" x 4"	HSSA-30	487784
	6" x 4"	HSSA-30	487767
	6" x 4"	HSSA-30	487771
	6" x 4"	HSSA-30	487800
	6" x 4"	HSSA-30	487783
	6" x 3-1/4"	HSSA-30	487819
	6" x 2-1/2"	HSSA-20	487789

## QUAD-CITIES FAILED BERGEN-PATTERSON "SNUBBERS"

## QUAD-CITIES 1

<u>System</u>	<u>Size</u> <u>Stroke x Bore</u>	<u>Model No.</u>	<u>Serial No.</u>
Core Spray	6" x 2-1/2"	HSSA-10	F-61284-1
	6" x 2-1/2"	HSSA-10	61284-1
	6" x 2-1/2"	HSSA-10	Missing
	6" x 2-1/2"	HSSA-10	F-61284
RHR	6" x 2-1/2"	HSSA-10	61284-1
	6" x 2-1/2"	HSSA-10	F-61284-1
	6" x 2-1/2"	HSSA-10	Missing
	6" x 2-1/2"	HSSA-10	F-61284-1
	6" x 2-1/2"	HSSA-10	F-61284-1
	6" x 3-1/4"	HSSA-20	F-51035
Recirculation	6" x 2-1/2"	HSSA-10	482594
	6" x 2-1/2"	HSSA-10	482604
	6" x 2-1/2"	HSSA-10	482580
	6" x 2-1/2"	HSSA-10	482605
	6" x 2-1/2"	HSSA-10	482559
	6" x 4"	HSSA-30	487792
	6" x 4"	HSSA-30	487761
	6" x 4"	HSSA-30	48780-9
	6" x 4"	HSSA-30	87775
	6" x 4"	HSSA-30	487820
	6" x 4"	HSSA-30	487780
	6" x 4"	HSSA-30	487760
	6" x 4"	HSSA-30	487774
	6" x 5"	HSSA-50	68290
	6" x 5"	HSSA-50	68290

## QUAD-CITIES 2

Core Spray	6" x 2-1/2"	HSSA-10	F62955-2
	6" x 2-1/2"	HSSA-10	F62955-2
	6" x 2-1/2"	HSSA-10	F62955-2
	6" x 2-1/2"	HSSA-10	F62955-2
RHR	6" x 2-1/2"	HSSA-10	F-6128-1
	6" x 2-1/2"	HSSA-10	F-6128-1
	6" x 2-1/2"	HSSA-10	F-6128-1
	6" x 2-1/2"	HSSA-10	F-6128-1
Recirculation	6" x 2-1/2"	HSSA-10	6128411
	6" x 5"	HSSA-50	68290
	6" x 4"	HSSA-30	487722
	6" x 4"	HSSA-30	487801
Recirculation	6" x 4"	HSSA-30	487773
	6" x 4"	HSSA-30	487811
	6" x 4"	HSSA-30	487796
	6" x 2-1/2"	HSSA-10	482590
Recirculation	6" x 2-1/2"	HSSA-10	F-61284-1
	6" x 2-1/2"	HSSA-10	F-61284-1
	6" x 2-1/2"	HSSA-10	F-61234-1
	6" x 2-1/2"	HSSA-10	F-61284-1





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

Dupe  
~~8010170716~~

August 6, 1973

Mr. Boyce H. Grier  
Regional Director  
Directorate of Regulatory  
Operations - Region III  
U.S. Atomic Energy Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Subject: Inspection of Bergen-Patterson Shock Suppressors  
and Restraints at the Dresden, Quad-Cities and  
Zion Nuclear Generating Stations, AEC Dkts 50-10,  
50-237, 50-249, 50-254, 50-265, 50-295 and 50-304

Dear Mr. Grier:

On July 27, 1973, you requested that Commonwealth Edison conduct immediate inspections of all Bergen-Patterson shock suppressors and restraints ("snubbers") in use at our nuclear generating stations. This letter is to inform you of the status of those inspections.

It has been determined that no Bergen-Patterson "snubbers" are in use at Dresden Unit 1. Of the total of seven (7) "snubbers" furnished by others, five have been inspected and found operable. The 2 other "snubbers" on this unit will be inspected during the refueling outage scheduled to begin in mid-September, 1973.

Zion Unit 1 has sixteen Bergen-Patterson "snubbers" and over one thousand others made by Grinnel. All "snubbers" at Zion 1 were checked during hot functional testing early this year. All sixteen Bergen-Patterson "snubbers" were re-inspected on July 27, 1973, and found to be satisfactory in all respects. It is planned to complete this inspection before proceeding above 50% power.

Quad-Cities Unit 2 was shut down on July 28, 1973 to inspect "snubbers" in the drywell. Of the 29 Bergen-Patterson units in use a total of 19 are considered to be inoperable due to loss of fluid. The attached list details those failures. Sixteen (16) "snubbers" on Unit 2 were made by others. One of the 16 was found inoperable due to a loose tubing connection and loss of fluid.



Commonwealth Edison Company

Mr. Boyce H. Grier

- 2 -

August 6, 1973

On August 1, 1973 Unit 1 at Quad-Cities was removed from service for inspection of the 29 Bergen-Patterson "snubbers". A total of 24 were found to be inoperable due to loss of fluid. Those failures are also detailed on the attached list. Inspection of the 18 other "snubbers" revealed two which were inoperable. Neither failure was attributed to seal problems. One had a broken oil line and the other had a loose connection.

Dresden Unit 3 was taken off our system on July 31, 1973 for inspection. Of the 43 Bergen-Patterson "snubbers" on that unit 29 are inoperable due to loss of hydraulic fluid. The locations of those units are included on the attached list. One of the eleven other "snubbers" was inoperable due to low fluid level in accumulator. It was attached to the turbine bypass line to the condenser.

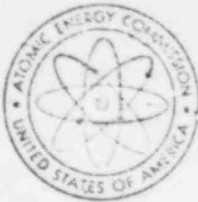
The inspection outage on Dresden Unit 2 began on August 2, 1973. A total of 28 out of the 43 Bergen-Patterson "snubbers" have been found to be inoperable due to loss of fluid. The attached list gives the specifics. Two of the eleven other "snubbers" were inoperable. They were also attached to the turbine bypass line to the condenser.

The defective "snubbers" identified during these inspections will be repaired prior to resumption of operation. The first time that Dresden 2 and 3 and Quad-Cities 1 and 2 are shut down following one month's operation, the drywells will be de-inerted and the Bergen-Patterson "snubbers" inspected. A program of more frequent surveillance on the Bergen-Patterson "snubbers" located outside the drywell at Dresden will be implemented.

Very truly yours,

*Byron Lee Jr.*  
Byron Lee, Jr.  
Vice-President

<u>Unit</u>	<u>System</u>	<u>Number Failed</u>	<u>Size (Stroke x Bore)</u>
Dresden 2	HPCI	5	6" x 2-1/2"
	LPCI	2	6" x 2-1/2"
	core spray	2	6" x 2-1/2"
	feed water	3	6" x 2-1/2"
	cleanup	3	6" x 2-1/2"
	recirculation	9	6" x 4"
		2	6" x 3-1/4"
		2	6" x 2-1/2"
Dresden 3	HPCI	5	6" x 2-1/2"
	LPCI	2	6" x 2-1/2"
	core spray	2	6" x 2-1/2"
	cleanup	3	6" x 2-1/2"
	feedwater	3	6" x 2-1/2"
	recirculation	11	6" x 4"
		1	6" x 3-1/4"
		2	6" x 2-1/2"
Quad-Cities 2	core spray	4	6" x 2-1/2"
	RHR	5	6" x 2-1/2"
	recirculation	1	6" x 5"
		5	6" x 4"
		4	6" x 2-1/2"
Quad-Cities 1	core spray	4	6" x 2-1/2"
	RHR	6	6" x 2-1/2"
	Recirculation	5	6" x 2-1/2"
		8	6" x 4"
		1	6" x 5"



3

UNITED STATES  
ATOMIC ENERGY COMMISSION  
DIRECTORATE OF REGULATORY OPERATIONS  
REGION III  
799 ROOSEVELT ROAD  
GLEN ELLYN, ILLINOIS 60137

TELEPHONE  
(312) 858-2600

August 17, 1973

Commonwealth Edison Company  
ATTN: Mr. Byron Lee, Jr.  
P. O. Box 767  
Chicago, Illinois 60690

Pockets No. 50-237  
50-249  
50-254  
50-265  
50-295

Gentlemen:

The reports of your action in response to Regulatory Operations Bulletin No. 73-3, dated July 27, 1973, and other information concerning Bergen-Paterson hydraulic shock absorbers, indicate that additional action is advisable.

Enclosed is Regulatory Operations Bulletin No. 73-4 which provides you with additional information and lists certain actions that appear appropriate on a timely basis. The Directorate of Licensing currently is evaluating the need for a continuing surveillance program for hydraulic shock absorbers.

You are requested to take the action shown under ACTION INDICATED in the enclosed Regulatory Operations Bulletin No. 73-4, dated August 17, 1973.

Should you have questions concerning this matter, please contact me.

Sincerely,

Boyce H. Crier  
Regional Director

Enclosure:  
EO Bulletin 73-4

bcc: RO Files  
DR Central Files  
PDR  
Local PDR  
OGC, Beth, P-506A  
H. M. Wilchins (2)

Dupe of  
830614084

Inquiry  
50-237/249  
50-254/265/295

DEFECTIVE BERGEN-PATERSON HYDRAULIC SHOCK ABSORBERS

INFORMATION

Reference is made to Regulatory Operations Bulletin 73-3, dated July 27, 1973, entitled DEFECTIVE HYDRAULIC SHOCK ABSORBERS AND RESTRAINTS which provided information on known problems with hydraulic shock absorbers and which requested actions, including inspections of installed hydraulic shock absorbers, by certain utilities.

The compiled results of these inspections of Bergen-Paterson shock absorbers, based on telephone reports from affected licensees to the five Regional Offices of the Directorate of Regulatory Operations, reveal that a large percentage of installed Bergen-Paterson hydraulic shock absorbers were not fully operational. In addition, preliminary information indicates that routine repairs, replacing defective seals and filling hydraulic oil reservoirs may not be an adequate long range solution to this problem. There is also some indication that deterioration of the affected hydraulic shock absorbers can occur over a relatively short period of time (less than 90 days).

ACTION INDICATED

1. Schedule a reinspection of Bergen-Paterson hydraulic shock absorbers installed in safety related systems to be conducted approximately 45 days and no longer than 90 days after the plant has been at operating temperature subsequent to the inspection performed as requested in RO Bulletin 73-3.
2. The inspection should include the following:
  - a. Determination of condition of seals.
  - b. Verification of overall integrity of shock absorber assemblies.
  - c. Examination for loss of fluid, fluid leaks, and other signs of distress.
  - d. Recording of piston rod extension and fluid level indicator positions.
3. Inform this office of the planned date for reinspection of the Bergen-Paterson hydraulic shock absorbers.

4. Provide this office with a prompt telephone report of the significant findings of this reinspection. If defective shock absorbers are identified, a written report should be submitted to this office within 10 days following completion of the inspection; if no defective shock absorbers are identified, the written report should be submitted within 30 days following the completion of the inspection.
5. The written report should include the following:
  - a. As appropriate for each defective shock absorber identified, a description of the mode of failure, corrective action and tests performed to determine the adequacy of the repair.
  - b. A description of the program for the development and subsequent installation of a permanent modification to the hydraulic shock absorber installation to assure proper operation. The description should include the technical basis for the conclusion that deficiencies in the Bergen-Paterson hydraulic shock absorbers have been resolved.



UNITED STATES  
ATOMIC ENERGY COMMISSION  
DIVISION OF COMPLIANCE  
REGION III  
799 ROOSEVELT ROAD  
GLEN ELLYN, ILLINOIS 60137

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(312) 858-2660

AUG 17 1973

LOCAL PUBLIC DOCUMENT ROOMS

Enclosed are copies of documents listed below relating to  
Commonwealth Edison Company, Docket  
No(s). 50-237 and 50-249.

Letter to Commonwealth Edison Company from B. H. Grier dated  
August 17, 1973.

This correspondence is submitted pursuant to arrangements made by  
the Public Proceedings Branch, Office of the Secretary, for use by  
the public.

Where possible, these materials should be punched and filed in a  
folder labeled as follows:

CORRESPONDENCE TO AND FROM APPLICANT OR LICENSEE  
(Excluding Environmental and Antitrust)

*Boyce H. Grier*  
Boyce H. Grier  
Regional Director

Enclosures:  
As noted above

cc: Washington Public Document Room, w/encl  
Central Mail & Files Unit, Document Room Clerk, w/o encl

*Dupe of  
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