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

EBS Ltr. # 390-75

Dresden Nuclear Power Station
R. R. #1
Morris, Illinois 60450
June 23, 1975

Mr. James G. Keppler, Regional Director
Directorate of Regulatory Operation-Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60450

SUBJECT: REPORT OF ABNORMAL OCCURRENCE PER SECTION 6.6.A OF THE TECHNICAL SPECIFICATIONS
FAILURE OF 2-203-3C ELECTROMATIC RELIEF VALVE TO OPERATE

References: 1) Regulatory Guide 1.16 Rev. 1 Appendix A

2) Notification of Region III of U. S. Nuclear Regulatory Commission
Telephone: Mr. Knopf, 1300 hours on June 13, 1975
Telegram: Mr. Keppler, 1620 hours on June 13, 1975

3) Drawing Number M-12

Report Number: 50-237/75-41

Report Date: June 23, 1975

Occurrence Date: June 13, 1975

Facility: Dresden Nuclear Power Station, Morris, Illinois

IDENTIFICATION OF OCCURRENCE

Electromatic relief valve 2-203-3C failed to operate while being tested at rated pressure.

CONDITIONS PRIOR TO OCCURRENCE

Unit-2 was operating at rated reactor pressure with the bypass valves open and the turbine off the system. The unit was shutting down for a weekend outage.

DESCRIPTION OF OCCURRENCE

At 0405 hours on June 13, 1975 electromatic relief valve 203-3C failed an operability test, exhibiting no bypass valve response and only a slight temperature increase on the pilot valve recorder. Valve 203-3B had failed on May 26 (Report No. 50-237/75-32) during post-maintenance testing. Electromatic relief valves A, D, and E were all tested successfully.

6908

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE (Component Failure)

The failure of both electromatic valves 3C and 3B appeared to be due to leaking seal rings in the valve. This leakage caused a loss of pressure differential within the valves, eliminating the motive force necessary for valve operation (see enclosed diagram). A Dresser Valve representative was present during disassembly of the failed valves, and he concurred with the opinion that the worn seal rings were the probable cause of failure on both valves.

ANALYSIS OF OCCURRENCE

Since the unit had been already scheduled for a weekend outage to repair electromatic relief valve 3B, the Technical Specifications were met for two inoperable electromatic relief valves; i.e., the unit would be shut down within 24 hours. The health and safety of plant personnel and the public were not endangered by this occurrence.

CORRECTIVE ACTION

The immediate corrective action was to check fuse continuity for valve 3C. The circuit was determined to be operable. The unit continued a normal shutdown and cooldown to allow maintenance to begin.

Both electromatics were replaced with rebuilt valves. Successful surveillances on these valves were performed at 150 psig and at rated reactor pressure as the unit was brought back up on June 16, 1975.

Dresser Valve is currently evaluating a new type of seal ring material to prevent recurrences of this nature. Since the cause of failure for valve 3B has now been identified and corrected, this letter will be submitted in lieu of the follow-up report referred to in report no. 75-32.

FAILURE DATA

Electromatic relief valve failures have occurred on Unit-3 January 16, 1974 (report no. 57-74) and on Unit-2 May 20 (report no. 75-30) and May 26 (report no. 75-32), 1975.

The electromatic relief valves are 6" valves, catalogue no. 1525-VX, manufactured by Dresser Industrial Valve.

B. B. Stephenson
Superintendent

BBS:JSK:smp

File/NRC

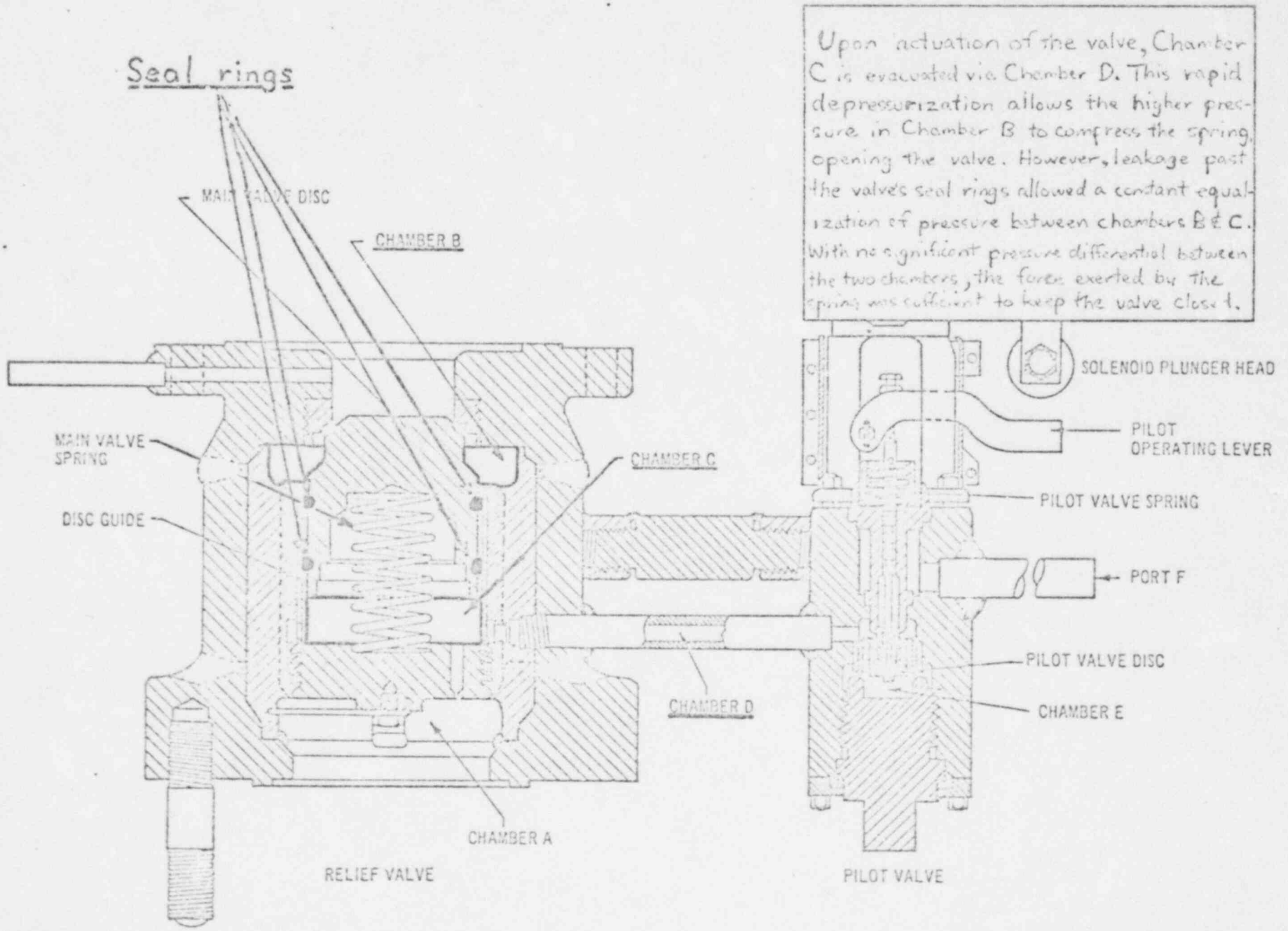

Figure 27-3. RELIEF VALVE (CROSS SECTION)

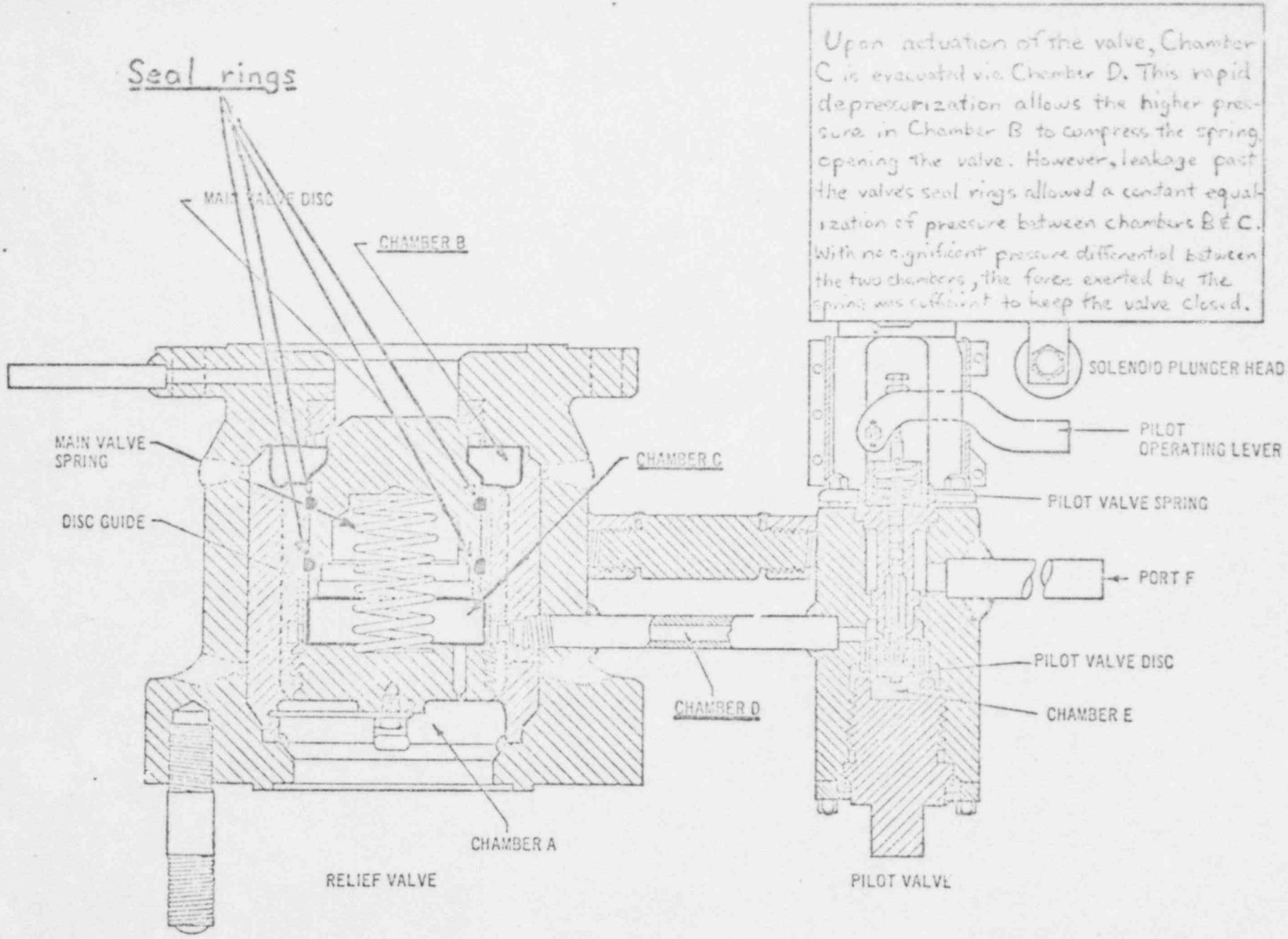

Figure 27-3. RELIEF VALVE (CROSS SECTION)

James G. Keppler, Regional Director
Directorate of Regulatory Operations
Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Telephoned
or
Telegraphed: Date 6-13-75
at 4:45 p.
re 1:55 p.
By GAD

cc:
Bernard C. Rusche, Director
Directorate of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

50-237

SUBJECT: DPR- 19, Dresden Nuclear Power Station, Unit 2.

This will confirm a conversation with MR KROOF of your office at 1300 hrs this date concerning FAILURE OF 3C ELECTROMATIC RELIEF VALVE TO OPERATE AT 0415 THIS MORNING. THIS IS THE SECOND ELECTROMATIC RELIEF VALVE TO BE INOPERABLE, BUT UNIT WAS IN PROCESS OF SHUTTING DOWN FOR REPAIR ON FIRST ELECTROMATIC RELIEF VALVE. THERE WAS INDICATION OF PILOT ACTION, BUT NOT THE MAIN VALVE. FAILURE WAS DISCOVERED DURING ROUTINE SURVEILLANCE TEST PRIOR TO THE OUTAGE.

50-237
original

6-13-75 4:45 p

To Call:
CX - 3-850-2660-16 (auto)
DC - 9-1-301-492-7817 (auto)
WU - 815-942-4449/4321

Station Dist: Originator (copy)
Incident File (copy)
Telegram File (original)

- on 6

D. N. Stephenson, Superintendent
Dresden Nuclear Power Station
Commonwealth Edison Company
R.R. #1
Morris, IL 60450

Telephone: 815-942-2920/2921x212
(telecopy x262)