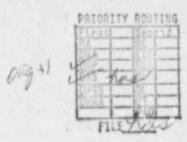
Detroit Edison

6400 North Dixie Highway Newport, Michigan 48166 (313) 586-4150



NRC-88-0228 August 29, 1988

Mr. Bert Davis U. S. Nuclear Regulatory Commission Region III 799 Roosevelt Rd. Bldg. 4 Glen Ellyn, IL 60137

Reference:

rmi 2

NWC License No. NPF-43

Subject:

Action Plan on Recirculation Pump B Discharge Valve, B3105-F031B

Detroit Edison has established an investigation team to thoroughly investigate the reasons for the failure of Valve B3105-F031B which occurred August 28, 1988. The same valve failed to close on August 28, 1988.

Robert Stafford, the Director Nuclear Quality Assurance and Plant Safety has been appointed to lead this investigation team. He is charged with coordinating all steps of the investigation, remaining independent in reaching an unbiased conclusion and evaluating this failure for generic implications for motor operated valves at Fermi 2.

We have developed the action plan. Some of the actions listed will be performed concurrently and the order of others may be modified as the plan progresses. It is expected that the action plan will be adjusted as results are obtained. We will notify the NRC of the results and of any deletions to the plan.

The investigation team's conclusions will be presented to the Nuclear Safety Review Group for their review and concurrence. We will also await NRC review prior to reactor startup.

If you have any questions please contact Lynne Goodman at (313)-586-4211.

Sincerely,

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IE01 /

USNRC August 29, 1988 NRC-88-0228 Page 2

Enclosure

cc: Mr. R. Cooper Mr. R. C. Knop Mr. Ted Quay Mr. W. G. Rogers INVESTIGATION PLAN
B31-F031B
RECIRCULATION PUMP B DISCHARGE VALUE

PHASE 1: TESTING PERFORMED AUGUST 28, 1988;
PLANT AT RATED TEMPERATURE AND PRESSURE

OBJECTIVE WAS TO DETERMINE IF PROBLEM IS MECHANICAL OR ELECTRICAL. IF ELECTRICAL, DETERMINE IF IT IS TORQUE SWITCH, LIMIT SWITCH, PUSH BUITON, HOLD IN CONTACT, ETC.

RESULTS: WHEN THE CLOSE CONTACTOR WAS MANUALLY HELD IN, MOTOR VOLTAGE AND CURRENT WERE MONITORED. VALVE MOVED IN THE CLOSE DIRECTION ONLY WHEN THE CONTACTOR WAS MANUALLY HELD IN. MOTOR CURRENTS WERE NORMAL.

CONDUCTED BY TECH GROUP ENGINEERING MAINTENANCE WITH QUALITY ASSURANCE IN ATTENDANCE.

PHASE 2: TESTING TO BE PERFORMED AUGUST 29, 1988; PLANT IN COLD SHUTDOWN

OBJECTIVE WAS TO REPEAT THE PHASE I TESTING BUT MONITOR ADDITIONAL POINTS TO TRY TO LOCALIZE THE PROBLEM TO ONE COMPONENT. BASED ON PRELIMINARY RESULTS, VALVE CLOSED NORMALLY.

CONDUCTED BY TECH GROUP/ENGINEERING/MAINTENANCE WITH QUALITY ASSURANCE IN ATTENDANCE.

WILL EVALUATE DIFFERENCES BETWEEN HOT AND COLD TEST CONDITIONS.

PHASE 3: PERFORM VISUAL INSPECTION OF THE MOTOR OPERATOR INTERNALS.

OBJECTIVE IS TO VISUALLY EXAMINE THE MOTOR OPERATOR UNDER CONTROLLED CONDITIONS TO DETERMINE CAUSE OF THE PROBLEM.

FURTHER DEVELOP A DETAILED INVESTIGATION PLAN WITH INSPECTION POINTS CLEARLY DEFINED BEFORE DOING ANY WORK ON THE ACTUAL MOTOR OPERATOR.

OUTSIDE TECHNICAL REPRESENTATIVES TO BE PRESENT IF POSSIBLE.

INSPECTION WILL INCLUDE THE FOLLOWING CHECKS:

- O CHECK THE LIMIT SWITCH ACTUATION POINTS
- O VERIFY THE TIGHTNESS OF LIMIT SWITCH AND TORQUE SWITCH WIRING ON THIS VALVE
- O REMOVE AND REPLACE THE TORQUE SWITCH WITHOUT DISTURBING THE OLD TORQUE SWITCH
- O CHECK FOR ARCING ON TORQUE SWITCH CONTACTS AND TERMINAL POSTS
- O CHECK RESISTANCE OF TORQUE SWITCH CONTACTS AND ASSOCIATED WIRING

O CHECK THE RECOMMENDED, MAXIMUM, AND ACTUAL TORQUE SWITCH SETTINGS

PHASE 4: CONDUCT REVIEW OF DOCUMENTATION AND INTERVIEW PERSONNEL

- O POST MAINTENANCE TESTING ADEQUACY
- O OPEN AND CLOSE LIMIT SWITCH SETPOINTS
- O VALVE OPERATING HISTORY AT DIFFERENT PLANT CONDITIONS
- O REVIEW OF THE CORRECTIVE AND PREVENTIVE MAINTENANCE PROGRAMS FOR ADEQUACY
- O REVIEW DEVIATION EVENT REPORT AND INDUSTRY OPERATING EXPERIENCE FOR GENERIC ISSUES
- O REVIEW OF METHOD OF TRACKING RECOMMENDED, MAXIMUM AND ACTUAL TORQUE SWITCH SETTINGS
- O REVIEW HISTORY ESPECIALLY RECENT WORK
- PHASE 5: DETERMINE ROOT CAUSE AND PROVIDE RECOMMENDATIONS ON CORRECTIVE ACTION
- PHASE 6: REVIEW BY OSRO AND NSRG PRIOR TO STARTUP

RBS:vlh 8/29/88