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Docket No. 50-237

BBS Ltr.#318-74

Dresden Nuclear Power Station
R. R. #1
Morris, Illinois 60450
May 3, 1974

Regulatory Docket File

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

SUBJECT: LICENSE DPR-19, DRESDEN NUCLEAR POWER, UNIT #2, REPORT OF ABNORMAL OCCURRENCE PER SECTION 6.6.B.1.a OF THE TECHNICAL SPECIFICATIONS. FAILURE OF UNIT 2/3 STACK GAS SAMPLING PUMPS.

References: 1) Notification of Region III of AEC Regulatory Operations
Telephone: Mr. F. Maura, 1300 hours on April 25, 1974
Telegram: Mr. J. Keppler, 1455 hours on April 25, 1974

2) Dwg: 12E2485

Dear Mr. O'Leary:

This letter is to report a condition relating to the operation of Dresden Units 2/3 at about 0720 hours on April 25, 1974. At this time, the control room stack gas sample flow/pressure abnormal annunciator and alarm signaled. 2/3 "A" stack gas sample pump was found to be tripped. 2/3 "B" stack gas sample pump was placed in service and it tripped at 0855 hours on April 25, 1974. This malfunction is contrary to section 3.8 A.1. of the Technical Specifications which requires that radioactive gases released from the plant chimney shall be continuously monitored. To accomplish this, at least one plant chimney monitoring system shall be operable at all times.

PROBLEM

On April 25, 1974 Dresden Unit 2 was operating at 2290 MWt and 764 MWe, Dresden Unit 3 was shutdown for refueling. The off-gas release rate from Unit 2, from grab sample data collected at 0435 hours, was 9.06 millicuries per second. At approximately 0720, the control room stack gas sample flow/pressure abnormal annunciator and alarm signaled. At approximately 0740, an operator arrived at the sample pump area and found 2/3 "A" stack gas sample pump tripped. At approximately 0800 the operator placed 2/3 "B" stack gas sample pump in service. 2/3 "B" stack gas sample pump tripped at 0855. At this time, station maintenance was notified to initiate repairs, the Unit 2 control room operator was instructed not to

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increase power on the unit and to increase surveillance on the off-gas ion chamber monitors, and Radiation Protection personnel were requested to supply and install a temporary sample pump. This temporary sample pump was installed and collecting iodine and particulates at 1033 a.m. Maintenance repaired 2/3 "A" stack gas sample pump and this pump was placed back in service at 1125 a.m. This action corrected the condition and brought the station into complete compliance with Technical Specifications. 2/3 "B" stack gas sample pump was repaired at approximately 1300 hours for standby service.

INVESTIGATION

The cause of failure for both "A" and "B" stack gas sample pumps was the breaking of the pump vanes. Simultaneous failure of both pump vanes has not occurred previously.

CORRECTIVE ACTIONS

The corrective actions initiated at the time of the incident were to provide a temporary sample pump and to initiate repairs on 2/3 "A" and 2/3 "B" stack gas sample pumps. 2/3 "A" pump was repaired and placed in service at 1125, 2/3 "B" pump was repaired at approximately 1300. Both pumps are functional at this time.

EVALUATIONS

The amount of time that the total plant chimney monitoring system was not in service was approximately 3 hours and 15 minutes. During this period, the Unit 2 reactor was in steady state operation. Unit 2 off-gas ion chamber monitor records during this period did not indicate any increases or decreases. As previously stated, grab sample data indicated a noble gas release rate prior to the incident of 9.06 millicuries per second which is 1.29 percent of the single unit operation Technical Specification limit. Iodine and particulate samples prior to and after the incident indicated a total release rate of 0.062 microcuries per second (1.8 percent of the single unit operation Technical Specification limit) and 0.095 microcuries per second (2.7 percent of the single unit operation Technical Specification limit), respectively. Due to the steady state operation of the unit and static response of the off-gas ion chambers, we conclude that no noble gas or iodine and particulate releases above previously stated values occurred during the period when the stack gas sampling pumps were out of service. Thus, neither the safe operation of the station nor the safety of the general public were changed during this period.

The corrective actions taken immediately following the loss of the stack gas sample pumps included: holding the unit at steady state operation, increasing surveillance of the off-gas ion chambers, immediate action to

repair the failed sample pumps, and initiation of a temporary sample pump. We conclude that these actions were appropriate and brought the condition safely and quickly into compliance with Technical Specifications. Since simultaneous stack gas sample pump failures have not occurred previously, the installed redundant sample pump system is adequate and does not impair the safe operation of the station.

Sincerely,

B. B. Stephenson
Superintendent

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