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Docket No. 50-346

License No. NPF-3

Serial No. 1-557

August 12, 1985



JOE WILLIAMS, JR.
Senior Vice President—Nuclear
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Mr. James M. Taylor, Director
Office of Inspection and Enforcement
United States Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Taylor:

On July 12, 1985, the NRC transmitted to the Toledo Edison Company a Notice of Violation and Proposed Imposition of Civil Penalty (EA 85-71) for violations reported in Inspection Report No. 50-346/85018 (DRP) (Log No. 1-1210). This letter and attachment represent the Toledo Edison Company's response under 10 CFR 2.201, to the three items of violation identified by the NRC in the Notice of Violation.

Based on the potential seriousness of the violations, Toledo Edison has elected not to protest the Proposed Imposition of Civil Penalties as provided by 10 CFR 2.205. A check for the full \$100,000 made out to the Treasurer of the United States is attached.

We have reviewed these violations as well as the reactor trip event of June 9, 1985. Discussions have been held with James G. Keppler, Regional Administrator of NRC Region III. In light of the communications problems noted, Toledo Edison Company has undertaken major management changes including new personnel and a major reorganization. The Company is now restructured in a way that improves the assignment of responsibility for technical support of Davis-Besse Station. Additionally, the Maintenance function has been significantly restructured. We are now revising and reemphasizing management controls to ensure that problems are evaluated, communicated to the responsible organizational element, root cause determined and timely corrective action taken.

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It is my intention for us to maintain a continuous dialog with the Senior Resident Inspector and the Regional Administrator to monitor the effectiveness of our efforts to improve both the regulatory performance and the reliability of the Davis-Besse Nuclear Power Station.

Attachment enclosed provides Toledo Edison's assessment of the violations.

Very truly yours,


W/SGW/bjs

Enclosure

cc: Mr. J. G. Keppler, Regional
Administrator, Region III
DB-1 NRC Resident Inspector

ATOMIC ENERGY ACT OF 1954
SECTION 182
SUBMITTAL IN RESPONSE
FOR THE
DAVIS-BESSE NUCLEAR POWER STATION
UNIT NO. 1
FACILITY OPERATING LICENSE NPF-3

This letter is submitted in conformance with the Atomic Energy Act of 1954
Section 182 in response to Inspection Report No. 50-346/85018 (Log No.
1-1210).

By Joe Williams, Jr.
Joe Williams, Jr.
Senior Vice President, Nuclear

Sworn to and subscribed before me this 12th day of August, 1985.

Beverly J. Szudlowski
Notary Public, State of Ohio
My Commission Expires Feb. 26, 1988.

I. Violation: 10 CFR 50, Appendix B, Criterion XIV, "Inspection, Test, and Operating Status," requires measures be established for indicating the operating status of structures, systems, and components of the nuclear power plant. The Toledo Edison Nuclear Quality Assurance Manual (NQAM) Section 14.0 requires that the plant manager be responsible for establishing and maintaining a program in which the operating status of equipment is known at all times. Section 14.1.1.1 of the NQAM requires that permission to release equipment or systems for maintenance or test be granted by the Shift Supervisor.

Contrary to the above, on April 9, 1985, the licensee did not implement its program to ensure that the operating status of equipment is known at all times. The security-fire/radiation computer was removed from service, without permission being granted by the Shift Supervisor. The Shift Supervisor became aware of the computer shutdown when the computer was being returned to service.

I. Response: (1) Admission or denial of the alleged violation.

Toledo Edison admits Violation I.

(2) The reasons for the violation, if admitted.

The Control Room indication for Fire Detection Instrumentation is tied to the security-fire/radiation computer. Technical Specification 3.3.3.8 (Limiting Condition for Operation) requires as a minimum that the fire detection instrumentation for each fire detection zone in Technical Specification Table 3.3-14 shall be operable. Taking the computer out of service places the Station in the action statement of Technical Specification 3.3.3.8, requiring that fire watch patrols be established within one hour. These fire watches provide inspection of the fire detection zone panels located throughout the Station and satisfies the Technical Specification action statement.

On April 9, 1985, the Shift Supervisor was notified by the Security Central Alarm Station (CAS) operator at 0855 hours that the key had been inserted into the security-fire/radiation computer in preparation for placing the computer out of service. Per the Security Plan, anytime the key is inserted into the computer the Shift Supervisor is notified. The computer was not actually taken out of service until 0915 hours. Procedural guidance did not specify the individual responsible for notifying the Shift Supervisor when the computer was taken out of service. Consequently, no notification of the exact time the computer was taken out of service was made. The above miscommunications coupled with the plant preparation for startup resulted in the failure to establish a fire watch patrol within one hour as required by Technical Specification 3.3.3.8.

- (3) The corrective steps which have been taken and the results achieved.

At 1120 hours Fire Watch Patrols were established per Administrative Procedure AD 1810.00, Fire Protection Program. Fire Watch Patrols were continued until 1530 hours when the security-fire/radiation computer was placed back in service.

Further evaluation of the issue has concluded that the action statement of Technical Specification 3.3.3.8 was being satisfied. A review was conducted of the fire drawings A201F through A210F against the fire watch patrol sheets for the RACA and non-RACA areas currently being patrolled due to 10 CFR 50 Appendix R compensatory measures. The review indicated that the fire watch patrols already established would take the personnel by the fire detection zone panels which would provide indication of any detector in alarm in that zone. It is standard practice at Davis-Besse for the Shift Supervisor to establish a special fire panel watch when the computer is out of service.

- (4) The corrective steps which will be taken to avoid further violations.

On April 16, 1985, the Nuclear Security Manager advised the Security Supervisors of their obligation to notify the Shift Supervisor when the security-fire/radiation computer is taken out of service.

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Industrial Security Practices and Procedures, NUC-007, Computer Outages, was revised on June 1, 1985 to require the Security Supervisor to notify the Shift Supervisor whenever an announced or unannounced outage of the security-fire/radiation computer occurs. This requires the Security Supervisor to notify the Shift Supervisor.

- (5) The date when full compliance will be achieved.

Full compliance with corrective actions has been achieved.

II. Violation:

Amendment No. 83 of Facility Operating License No. NPF-3 adds paragraph 2.C(3)(t) which states "Toledo Edison shall operate the Startup Feedwater Pump (SUFP) with the following operational restrictions:
1. Toledo Edison will station an operator in the Startup Feedwater Pump/Auxiliary Feedwater Pump (SUFP/AFW) area during operation of the SUFP to monitor SUFP/Turbine Plant Cooling Water (TPCW) piping status in the AFW Pump Rooms."

Contrary to the above, at approximately 1210 on April 24, 1985, during operation of the SUFP, the NRC inspector observed that a non-licensed operator who had been assigned to monitor the SUFP/TPCW piping status in the AFW Pump Room was asleep and, therefore, failed to perform the required monitoring.

- II. Response: (1) Admission or denial of the alleged violation.

Toledo Edison admits Violation II.

- (2) The reasons for the violation, if admitted.

On July 18, 1984, Toledo Edison submitted Licensee Event Report (LER) 84-009 identifying that an un-analyzed situation existed in Auxiliary Feedwater (AFW) Pump Rooms 237 and 238 due to potential pipe break effects from non-seismic piping located in these rooms. On November 12, 1984, Toledo Edison submitted an application to add a new license condition which would allow for the use of the Startup Feedwater Pump (SUFP) for the duration of Cycle 5

operation. The license condition added a compensatory measure when in operating Modes 1, 2 or 3 and when using the SUFP, to station an operator in the SUFP/AFW area to monitor for pipe leakage. The license condition was issued on January 8, 1985 (Log. No. 1672).

On April 24, 1985, the Equipment Operator (EO), Level III, and another EO were assigned by the Shift Supervisor to monitor the SUFP/AFW area. The EO's were instructed to decide when to relieve one another in the AFW rooms. The NRC Resident Inspector, while passing through the area, noticed the on-duty EO on the steps asleep. The NRC Resident Inspector reported the incident to the Shift Supervisor and Operations Superintendent.

- (3) The corrective steps which have been taken and the results achieved.

The Operations Supervisor, Shift Supervisor, NRC Resident Inspector, and the EO met to discuss the incident. Immediate disciplinary action was administered by suspending the EO without pay for 1 day.

The Operations Superintendent has discussed the incident with operators during the weekly shift meeting. Points discussed were: 1) attention to duties, 2) disciplinary action if attention to duties is not adequate and 3) instructions to request relief from assigned duties prior to reaching a level of fatigue that would render the operator ineffective in their duties. There have been no recurring problems with operator inattention on duty since April 24, 1985.

- (4) The corrective steps which will be taken to avoid further violations.

In our letter of November 12, 1984 (Serial 1100), Toledo Edison committed to install a new SUFP, associated piping and valves to remove the hazards to the AFW Pumps before commencing Cycle 6.

- (5) The date when full compliance will be achieved.

Full compliance with corrective actions will be achieved with the installation of the new SUFP prior to commencing Cycle 6.

III. Violation: Technical Specification 3.2.5 requires that if the reactor coolant flow rate exceeds its limit, then flow must be restored to within its limit within 2 hours or thermal power must be limited at least 2% below rated thermal power for each 1% of flow that is outside the limit for four-pump operation within the next 4 hours.

Contrary to the above, from 1150 on April 19, 1985 to 0250 on April 20, 1985, while at approximately 98% power, the licensee recorded a reactor coolant flow rate 1.79% to 2.065% low. Since flow was not restored to its limit within 2 hours, thermal power was required to be limited to between 96.42% and 95.87%. From approximately 1720 on April 19, 1985 until approximately 0220 on April 20, 1985 hours on April 20, 1985 (9 hours), thermal power was approximately 98%. This exceeded the thermal power limit of Technical Specification 3.2.5.

III. Response: (1) Admission or denial of the alleged violation.

Toledo Edison admits Violation III.

- (2) The reason for the violation, if admitted.

On April 20, 1985 after reactor power was increased to 96 percent, operators suspected a problem with the computer heat balance calculation which read 95.2 percent. Generated megawatts indicated 903 MWe which corresponds to a reactor power of approximately 98 percent. Power was confirmed by a manual heat balance calculation to be 98.3 percent.

The unit was Technical Specification limited to 96 percent power due to Reactor Coolant System (RCS) measured flow being approximately 2 percent lower than the minimum flow requirement (396,880 pgm) Table 3.2-1 of the Technical Specifications. Therefore, for approximately 12 hours, the unit did not comply with the Action Statement of Technical Specification 3.2.5.

The variance in the RCS measured flow was determined to be a failure of feedwater flow transmitter FTSP2B2 in Loop 1. Each feedwater flow loop has two transmitters which are averaged and fed into the computer secondary heat balance calculation. These transmitters fail to a value of 4076.8 KGPM, which corresponds to a heat balance calculation of 87 percent power. The more reactor power was increased over 87 percent power, the greater the error was in the heat balance calculation. The root cause was that the I&C Technicians or operators failed to realize that the non-selected instrument still provided input into the reactor power heat balance calculation.

During the 1984 Refueling Outage, Burnable Poison Rod Assemblies (BPRA) were installed into the core as the result of a change to an 18-month cycle. Since this changed the flow distribution through the core, the minimum required RCS flow required for DNB considerations was reanalyzed. Reanalysis indicated that the minimum RCS flow could be lowered to 389,644 gpm, which is less than what was being measured at the time of the occurrence. Our letter of February 13, 1985 (Serial No. 1125) transmitted a license amendment application to revise the minimum RCS flow requirement to take credit for decrease in the core bypass flow as a result of using Lump Burnable Poison Rods in Cycle 5 design. Ironically, had the License Amendment been issued, Toledo Edison would not have been in violation of Technical Specification 3.2.5.

- (3) The corrective steps which have been taken and the results achieved.

Reactor power was decreased below Technical Specification limits at approximately 0220 hours on April 20, 1985 as determined by a manual heat balance calculation. The computer heat balance calculation was modified to use only the redundant feedwater flow transmitter in Loop 1 which was available.

On April 30, 1985, Surveillance Test ST 5042.03, RCS Flow Test, was performed, and the actual RCS flow was 406,533 gpm which is greater than the present minimum required flow of 396,880 gpm specified in Table 3.2-1

of the Technical Specifications. The flow determined from ST 5042.03 is an accurate flow determined by a manual heat balance calculation. Therefore, at the time of this occurrence, even though measured flow was lower than the Technical Specification limit of 396,880 gpm, the actual flow was much greater. The measured flow was indicating lower as a result of the Baily RCS flow transmitters being replaced with Rosemont transmitters during the 1984 Refueling Outage. These new transmitters were calibrated prior to startup; however, they had yet to be compared to an actual calculated RCS flow value.

- (4) The corrective steps which will be taken to avoid further violations.

Surveillance Test ST 5030.01, RPS Heat Balance, which is performed daily to check nuclear instrumentation indicated power against the heat balance power was revised on June 7, 1985 (Revision 8) to provide an additional check of the heat balance calculations by comparing reactor power to feedwater flow and generated megawatts curve.

Temporary Modification (T-Mod) T-9176 was issued April 25, 1985 to modify Periodic Test PT 5131.02, Verification of Computer Calculations, requiring the performance of heat balance calculations weekly to verify the computer computations and to include a comparison of the inputs with other available instrumentation to assure that computer points are valid.

A Generic Guidance Memorandum was issued to emphasize the critical nature of the instrumentation and specifies the equipment associated with the performance of the reactor power heat balance calculations.

The feedwater flow transmitter FTSP2B2 was replaced with a transmitter under Maintenance Work Order 1-85-135000 on August 5, 1985.

- (5) The date when full compliance will be achieved.

Full compliance with corrective actions has been achieved.