



Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

August 21, 1992

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Document Control Desk

Subject: Dresden Nuclear Power Station Units 2 and 3
Response to Notice of Violation
Inspection Report 50-237/92014; 50-249/92014
NRC Docket numbers 50-237 and 50-249

References: B. Clayton letter to C. Reed dated July 22, 1992,
transmitting NRC Inspection Report 50-237/92014;
50-249/92014

Enclosed is Commonwealth Edison Company's (CECo) response to the Notice of Violation (NOV) which was transmitted with the reference letter and Inspection Report. The NOV cited two Severity Level IV violations each requiring a written response.

Violation 237/92014-01 concerns the adequacy of procedures and personnel performance in establishing and maintaining the proper level in the diesel generator day tanks. Violation 237/92014-03 concerns the adequacy of maintenance instructions and personnel performance associated with the replacement of the HPCI auxiliary oil pump motor. Our response to the specific violations is provided in the attachment.

If your staff has any questions or comments concerning this letter, please refer them to Denise Saccomando, Compliance Engineer at (708) 515-7285.

Sincerely,

P. L. Kovach for

T. J. Kovach
Nuclear Licensing Manager

TJK/EWC/pt

Attachment

cc: A. B. Davis, Regional Administrator - Region III
B. L. Siegel, Project Manager, NRR
W. G. Rogers, Senior Resident Inspector, Dresden

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ATTACHMENT

RESPONSE TO NOTICE OF VIOLATION

NRC INSPECTION REPORT

50-237/92014; 50-249/92014

VIOLATION: (237/92014-01)

10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances, and be accomplished in accordance with these instructions, procedures, or drawings.

Contrary to the above:

- A. On June 23, 1991, surveillance procedure SP 91-6-70, emergency diesel generator full load rated four hour fuel consumption test, was not of a type appropriate to the circumstances in that it specified a range of 2500 - 2600 kW instead of only the full load rating of 2600 kW.
- B. On November 8, 1991 and April 28, 1992, an activity affecting quality was not accomplished in accordance with the prescribed Dresden administrative procedure (DAP). Specifically, the acceptance criteria contained in procedure DOS 6600-1 were altered by temporary change requests 91-320 and 92-201, although DAP 9-06, "Temporary Changes to Procedures," sections B.3 and 4, did not allow the intent of a procedure to be changed through a temporary change request.
- C. On November 8, 1991 and April 28, 1992, an activity affecting quality was not accomplished in accordance with the prescribed administrative procedure. Specifically, no safety evaluation was performed when procedure DOS 6600-1 was revised by temporary change requests 91-320 and 92-201, although DAP 10-02, "10 CFR 50.59 Review Screening and Safety Evaluation," form 10-2A, steps 1 and 7, requires the user to perform a safety evaluation when a change to a procedure involving tests or experiments was made, unless the change was strictly editorial in nature.
- D. On April 2, 1992, an activity affecting quality was not accomplished in accordance with the prescribed administrative procedure. Specifically, the 2/3 diesel generator's day tank drain valve, a locked valve, was not verified locked closed after being manipulated, although DAP 7-14, "Control and Criteria for Locked Equipment and Valves," requires final valve position for a locked valve to be independently verified by two individuals and documented in the unit log book.

REASON FOR VIOLATION (237/92014-01A)

At the time that Special Procedure 91-6-70, "Diesel Generator Fuel Consumption Test" was performed, Dresden Operating Surveillance (DOS) 6600-01 "Diesel Generator Surveillance Test" stated that the diesel generator shall be fully loaded to a range of 2500 to 2600 kW. Using DOS 6600-01 as the basis for the Special Procedure, Dresden Station failed to recognize that the fuel consumption test should be conducted at the established rated load of 2600 kW.

The potential variation from 2600 kW was not recognized as a significant error with regards to fuel consumption. Calculations performed at a later date showed that this variance from 2600 kW increased the fuel consumption by less than 4%. This minor margin of error is deemed to be not significant since the ability of the diesel generator to perform its design function was not compromised.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

Dresden Technical Surveillance (DTS) 6600-02, "Diesel Generator Fuel Consumption Test" has been written and implemented. This surveillance requires a full load of 2600 kW. This surveillance has been completed on all three diesel generators.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER VIOLATION

This event will be tailgated to Technical Staff Engineers by September 30, 1992.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance has been achieved with the performance of DTS 6600-02.

REASON FOR VIOLATION (237/92014-01B)

This portion of the violation relates to changing the acceptance criteria contained in DOS 6600-01 by use of temporary change requests (TCR) 91-320 and 92-201. Through discussion with the Senior Resident Inspector it was determined that TCR 92-201 should be designated as TCR 92-186.

When TCRs 91-320 and 92-186 were originated, it was believed that the acceptance criteria as stated in DOS 6600-01 were not changed. It was believed that the acceptance criteria as stated in Section H.2.c of DOS 6600-01 were to demonstrate the pumping ability of the Diesel Fuel Oil Transfer Pump. It was also believed that changes made by the TCRs were administrative in nature, in that they changed the desired levels in the day tank. Since these administrative controls did not inhibit the pump from performing its function, the performance of the pump was demonstrated during the performance of these TCRs.

However, upon further review of these TCRs it was observed that the changes to the day tank levels could be interpreted as changes to the acceptance criteria of DOS 6600-01, because those levels were contained in the step demonstrating the transfer pump performance.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

DOS 6600-01 was revised to clarify the acceptance criteria for the performance of the transfer pump.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER VIOLATION

This event will be tailgated with the Technical Staff Engineers with emphasis placed on thoroughly evaluating whether or not a temporary procedure change will affect the acceptance criteria of the procedure. This tailgate will be performed by September 30, 1992.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance has been achieved with the issuance of DOS 6600-01, Rev. 24, on July 31, 1992.

REASON FOR VIOLATION (237/92014-01C)

This portion of the violation addresses the failure to perform a safety evaluation when DOS 6600-01 was revised by temporary change requests (TCR) 91-320 and 92-201. Through discussion with the Senior Resident Inspector it was determined that TCR 92-201 should be designated as TCR 92-186.

Dresden Station agrees that no safety evaluation was performed for TCR 91-320 and TCR 92-186. As was discussed in example B of this violation, at the time these TCRs were originated, it was believed that the changes generated by them were administrative in nature and did not require a safety evaluation. Had it been identified at this time that the acceptance criteria were changed, then the proper safety evaluation would have been performed.

Form 10-2A of DAP 10-02 was filled out appropriately based upon the belief that the changes were administrative. However, it is recognized that had the changes been identified as changes to the acceptance criteria, Form 10-2A would then have been completely filled out identifying the need for a safety evaluation.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The TCRs have expired and procedure DOS 6600-01 was permanently revised on July 31, 1992.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER VIOLATION

This event will be tailgated with the Technical Staff Engineers with emphasis placed on thoroughly evaluating whether or not a temporary procedure change will affect the acceptance criteria of the procedure. This tailgate will be performed by September 30, 1992.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance has been achieved with the issuance of DOS 6600-01, Rev. 24, on July 31, 1992.

REASON FOR VIOLATION (237/92014-01D)

On April 2, 1992, the Unit 2/3 diesel generator day tank drain valve was manipulated to clear a day tank high level alarm in the control room. The 2/3 diesel day tank drain valve is identified in DOP 0400-M3, "Unit 2 Locked Valve List: Accessible During Operation", as a locked-closed valve. DAP 07-14, "Control and Criteria for Locked Equipment and Valves," requires that the final position of locked valves to be independently verified by two individuals, and documented in the Unit Log Book. The operators failed to comply with DAP 07-14 in that the independent verification was not performed following the manipulation of the 2/3 diesel generator day tank drain valve. The safety significance of the occurrence is minimal since the valve was subsequently verified to be locked in the closed position.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The 2/3 diesel day tank drain valve was verified to be locked in the closed position on April 3, 1992.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER VIOLATION

Training will be conducted on the independent verification requirements specified on DAP 07-14, "Control and Criteria for Locked Equipment and Valves" for all licensed and non-licensed personnel during six week continuing license training. This training will begin on October 5, 1992, and will be completed on November 16, 1992.

Additionally, a procedure will be developed to instruct operators on the process of draining diesel generator drain tanks, and the procedure will be implemented by December 31, 1992.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance was achieved on April 3, 1992, when the 2/3 diesel generator day tank drain valve was closed and independently verified closed.

VIOLATION: (237/92014-03)

10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances, and be accomplished in accordance with these instructions, procedures, or drawings.

Contrary to the above, on June 19, 1992, replacement of the Unit 2 high pressure coolant injection auxiliary oil pump motor, an activity affecting quality, was not prescribed by documented instructions or procedures appropriate to the circumstances as shown by the following examples:

- A. The procedure improperly directed the motor leads to be reversed at the motor control center.
- B. The procedure provided no direction on how to assemble the flange connection for the oil pump's strainer.
- C. No out-of-service instruction was provided prior to draining the HPCI oil tank.

REASON FOR VIOLATION (237/92014-03A)

On June 18, 1992 a replacement motor for a grounded Unit 2 HPCI Auxiliary Oil Pump motor failed. The replacement motor was not an exact like-for-like replacement. This motor was initially wired up and then bumped for rotation. The rotation of the motor was incorrect, and leads at the MCC were reversed to correct the rotation. When the motor was turned "on" after the lead reversal, the motor was observed to be smoking and the breaker tripped. Further investigation of the motor through bridge and meggering techniques indicated that the motor had failed.

An investigation indicated that the root cause of this event was an improper method used to reverse the rotation of the motor. The work package was deficient in that it did not provide the proper directions for wiring the replacement motor.

To reverse the rotation of a D.C. motor requires that either the field leads or the armature leads be reversed. This must be done at the motor unless all motor leads are brought out to the Motor Control Center (MCC). In this case, only three leads were brought out from the motor to the MCC. When the leads were reversed at the MCC, a shorted-out shunt field was placed in series with the motor's armature. Without a shunt field, the armature windings failed.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

A second replacement motor was successfully installed with proper work instructions added to the package on how to reverse rotation if rotation is found to be incorrect.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER VIOLATION

Additional training on how to properly reverse motor rotation for AC and DC applications will be included in the Electrical Maintenance Department's continuing training scheduled to begin September 14, 1992 and conclude December 12, 1992.

Maintenance management will be instructed to inform the Technical Staff System Engineer or the Nuclear Engineering Department of replacement part differences, ensuring that system operation is not jeopardized. Additionally, the department's expectation that the work analyst must review replacement parts for technical adequacy prior to routing the work package for approval, will be tailgated by August 28, 1992.

This event has been tailgated to the Electrical Maintenance Department by the Master Electrician. Special emphasis was placed on maintaining a questioning attitude.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance was achieved with the successful installation of the second motor.

REASON FOR VIOLATION (237/92014-03B)

During the replacement of the HPCI auxiliary oil pump motor, replacement directions were not given in the work package for the installation of the suction strainer. The normal practice for mechanics is to punch mark flanges prior to disassembly. Based on this practice, the preparer of the work instructions did not include instructions directing the mechanic to punch mark the flange or to indicate the orientation of the strainer.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The work package was revised to provide guidance for the oil strainer installation, and the strainer was properly installed.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER VIOLATION

A revision has been made to the "Work Analyst Guide to Work Package Preparation" to include instructions for ensuring proper orientation of equipment during reassembly.

Training will be conducted for the Mechanical Maintenance Department on the acceptable methods for match marking equipment. This training will be completed by December 18, 1992.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance was achieved with the successful installation of the oil strainer.

REASON FOR VIOLATION (237/92014-03C)

On June 19, 1992, the Unit 2 HPCI auxiliary oil pump motor was taken out of service to replace the motor. The reservoir was drained to support the motor replacement. After the motor was replaced, a rotational test was performed. The motor turned backwards indicating the motor leads were reversed.

The procedure was incorrect, as it directed the leads to be reversed at the breaker instead of at the motor, causing the motor to burn out. To replace the motor, the system needed to be out-of-service. While preparing the out-of-service, the Shift Supervisor used a previous out-of-service as a guide, which failed to provide instructions for taking the HPCI oil heater out-of-service. After installation of the second oil pump motor, oil was added to the reservoir. The oil splashed on the hot heater generating smoke. The filling of the day tank was stopped and the heater was racked out and added to the out of service for replacing the motor.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The filling of the HPCI oil reservoir was stopped and the HPCI oil heater was de-energized. The out-of-service was rewritten to include the oil heater.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER VIOLATION

The Shift Supervisor was counselled by the Operations Staff Supervisor on the need to verify all points of isolation when removing equipment from service.

A special tailgate will be issued to all Operating Shift Supervisors by September 30, 1992. This tailgate will instruct all of the supervisors that standardized out-of-service requests must be thoroughly reviewed to ensure that they encompass the work scope of the outage.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance was achieved on June 19, 1992, when the equipment outage was changed to include the oil heater.