

INDIANA & MICHIGAN ELECTRIC COMPANY

P.O. BOX 16631
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December 21, 1984
AEP:NRC:0908A

Donald C. Cook Nuclear Plant
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
NRC REPORT NOS. 50-315/84-18 and 50-316/84-20
NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF
CIVIL PENALTY

Mr. Richard C. DeYoung, Deputy Director
Office of Inspection Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. DeYoung:

This letter responds to the Region III letter dated November 21, 1984 which refers to the subject Inspection Report of the routine safety inspection conducted by the Region III staff at the Donald C. Cook Nuclear Plant during the period June 21 through August 30, 1984. The Notice of Violation and Proposed Imposition of Civil Penalty transmitted by the Region III letter addressed three violations of technical specification requirements and proposed a civil penalty of \$50,000. Our response for each violation is presented below. This is followed by a discussion of the generic corrective actions we have taken to increase management involvement in the oversight of surveillance testing activities and to improve operator understanding of the technical specification requirements to ensure correct application of operating procedures. These generic improvement actions are the corrective actions to avoid future violation and concerns that are identified in the Region III November 21, 1984 letter.

We have taken unusually extensive corrective actions to assure not only proper operation of the systems cited in the Region III letter but all systems important to safety. Considering the magnitude of these actions, we request mitigation of the proposed civil penalty by 50 percent. We believe our actions meet the requirements for such reduction as specified under Section V.B.2 of Appendix C to 10 CFR Part 2. We are prepared to promptly pay the proposed civil penalty in whole or in part, based on your determination of our request for mitigation.

Violation - I: NRC Statement

Unit 1 Technical Specification 3.7.6.1 states, "two independent ESF ventilation system exhaust air filter trains shall be operable" in Modes 1, 2, and 3. Technical Specification 3.0.3 requires that when a Limiting Condition for Operation is not met, within one hour action shall be initiated to place the unit in a MODE in which the specification does not apply. When in HOT STANDBY (Mode 3) be in at least HOT SHUTDOWN (Mode 4) within the following six hours, and COLD SHUTDOWN within the subsequent 24 hours.

Contrary to the above, Unit 1 was in Mode 3 (Hot Standby) at 1941 hours on June 20, 1984 with both ESF exhaust fans inoperable and remained in this condition until 0737 hours on June 21, 1984 thereby exceeding the six hour time limit to be in Mode 4 (Hot Shutdown).

Response to Violation

1. Admission or Denial of the Alleged Violation

Indiana & Michigan Electric Company acknowledges that from 1941 hours on June 20, 1984 to 0737 hours on June 21, 1984 one of the ESF ventilation trains was inoperable because the automatic starting feature was in the off position. The second train was administratively inoperable, in that, it was undergoing surveillance testing. The second train was, in fact, functioning in its most conservative mode throughout the surveillance test. Therefore, if needed, the second train would have performed its safety function. The evaluation of this event in the Region III report indicated that the safety significance was minor.

2. Reason for the Violation

At 0725 on June 21, 1984, the unit was in Mode 3 (HOT STANDBY) preparing for a unit startup following a reactor trip which occurred four days earlier. The ESF ventilation system is composed of two fan/filter exhaust units which draw air from the ECCS pump and heat exchanger enclosures via a common vent shaft and discharge to the plant unit vent. When the fan control switch is in the auto position, the associated fan will automatically start if any component in its related ESF train is started. Upon receipt of a containment isolation Phase B signal, the air flow is directed through charcoal filters.

Proper performance of the Surveillance Test (**12 THP 4030 STP 228) requires that the alternate fan not being tested be in the off position. The performance engineer requested the control room operator to place the control switch for the fan being tested in the run position, and to stop running the opposite fan. The operator started the test fan and stopped the running fan, but did not place its control switch in auto.

The fan, not being tested, was available at all times and would have fulfilled its design function with operator action. Ventilation flow was being supplied by the fan under test at all times. The fan under test would have performed its design function even while it was being tested. It was considered inoperable until the surveillance test, which involved testing the filter banks for bypass, had been satisfactorily completed. The charcoal filters were in service and the fan was running during the test. The unit subsequently passed its test.

3. Corrective Action Taken

The surveillance testing procedure (**12 THP 4030 STP 228) has been changed to require the control switch for the fan, not being tested, to be placed in auto. Emergency procedures have been revised to assure the ESF fan control switch is properly positioned when the ventilation system is needed.

4. Corrective Action to be Taken to Avoid Further Violation

The generic corrective action programs that were discussed at the September 7, 1984 Enforcement Conference are presented later in this letter. These programs are the long term corrective actions taken to avoid further violations.

5. Date When Full Compliance Will be Achieved

Full compliance was achieved on June 21, 1984 when the control switch for the ESF fan was placed in auto. The surveillance procedure was changed on July 10, 1984. The emergency procedures were revised on September 18, 1984. Additional long term corrective actions are discussed under the generic corrective action programs.

Violation - II: NRC Statement

Unit 1 Technical Specification 3.7.1.2, requires that two motor driven auxiliary feedwater pumps be operable in Modes 1, 2, and 3.

Technical Specification 3.3.2.1, Engineered Safety Feature Actuation System Instrumentation, Table 3.3-3, Item 6, requires operability of the Motor Driven Auxiliary Feedwater Pump (MDAFP) automatic start feature for: steam generator low-low water level, 4kv bus loss of voltage, safety injection, and loss of Main Feedwater Pumps in Modes 1, 2, and 3. Technical Specification 3.0.3 requires that when a Limiting Condition for Operation is not met, within one hour action shall be initiated to place the unit in a MODE in which the specification does not apply. When in HOT STANDBY (Mode 3) be in at least HOT SHUTDOWN (Mode 4) within the following six hours, and at least COLD SHUTDOWN within the subsequent 24 hours.

Contrary to the above, on August 8, 1984, with Unit 1 in Mode 3 (Hot Standby) both Unit 1 MDAFP control switches were found by the licensee in the "after-trip" position. This defeated the automatic start feature for steam generator water level low-low and loss of Main Feedwater Pumps. The licensee failed to

recognize the technical specification limiting condition for operation and made no attempt within one hour to comply with the technical specification requirements. However, as there was a need to add water to maintain steam generator level, the switches were placed in the "auto" position in 5 hours 5 minutes for the East pump (0640 to 1145) and 4 hours 56 minutes (0658 to 1154) for the West pump thus removing the facility from the associated technical specification action requirements within the six hour period.

Response to Violation

1. Admission or Denial of the Alleged Violation

Indiana & Michigan Electric Company acknowledges the facts as stated above. We believe this event to be of limited safety significance because the operators are specifically trained to maintain the proper steam generator water levels.

2. Reason for Violation

In Mode 3 while using auxiliary feedwater for startup operations, the MDAFPs were tripped (stopped) and their control switches placed in neutral. This prevented the MDAFPs from restarting from the standing signal due to the main feed pumps not running. The tripped main feed pump condition is normal when going from Mode 4 to Mode 3. The MDAFPs were stopped because continuous water addition to maintain the steam generator levels was not necessary.

In addition, we understood that operating the system with proper operator attention, when the system was physically capable of performing its safety function, was consistent with the system design. We also believed this understanding was consistent with the intent of the operating requirements in the technical specifications.

3. Corrective Action Taken

The control switches were restored to the auto position and operators were instructed to leave the control switches in auto or close (run) while in Mode 3. In addition, a change request has been initiated for Technical Specification Table 3.3-3 to delete the requirement for automatic initiation of the MDAFPs upon loss of both main feedwater pumps while in Mode 3. This change is consistent with operation currently allowed by Standard Technical Specifications.

4. Corrective Action to be Taken to Avoid Further Violation

The generic corrective action programs are presented later in this letter. These programs are the long term corrective actions to avoid further violation.

5. Date When Full Compliance Will be Achieved

Full compliance was achieved when the control switches for the MDAFP were restored to operability on August 8, 1984. Change requests for the appropriate technical specifications are being prepared for submittal to the NRC. Additional long term corrective actions are discussed under the generic corrective action program.

Violation - III: NRC Statement

Units 1 and 2 Technical Specification 3.7.1.2 require that one steam driven auxiliary feedwater pump be operable in Modes 1, 2 and 3 for each unit.

Technical Specification 3.3.2.1 requires that the Engineered Safety Feature Actuation System instrumentation channels and interlocks be operable with response times as shown in Table 3.3-5. Table 3.3-5 items 9b and 12a specify Turbine Driven Auxiliary Feedwater Pump (TDAFP) response time as less than or equal to sixty seconds.

Contrary to the above, the TDAFPs for Units 1 and 2 were not capable of achieving rated conditions (discharge pressure, flow and speed) within sixty seconds due to improper setting of the governor valve controls. The valve controls had been set incorrectly since August 1978, thereby defeating the automatic capability of the TDAFPs to provide a heat sink for the reactor, as required by the Technical Specification.

Response to Item of Violation

1. Admission or Denial of the Alleged Violation

Indiana & Michigan Electric Company acknowledges that the TDAFP governor speed demand signal (set point) was positioned at 50% and therefore not capable of reaching rated conditions (discharge pressure, flow and speed) within sixty seconds without operator action. We also agree with the NRC conclusion discussed in Section 4. d of NRC Inspection Report 50-315/84-18 (DRP) and 50-316/84-20 (DRP). This conclusion states, in part; "...licensee procedures exist which specifically require the operator to verify flow to the steam generators following an Emergency Core Cooling System actuation (OHP 4023.001.002 "Emergency Procedure Immediate Actions and Diagnostics"). Operators routinely adjust Auxiliary Feedwater flow following a reactor trip to minimize plant cooldown. Based on these factors and the licensee's safety evaluation, the inspector concluded that although auxiliary feedwater capability was degraded, the safety function would have been preserved through reasonable operator action."

2. Reason for the Violation

The procedure in use specified that, following a successful demonstration of pump operability, the governor control (located in the control room) was to be backed-off to the 50% position. We believe this was done to preclude the TDAFP from tripping as a result of momentary overshoot during automatic startup. However, no specific instruction was given to the operator as to the final governor setting until Revision 4 of the TDAFP Surveillance Test Procedure OHP-4030.STP.017.

In Revision 4, dated August 8, 1978, the instruction to reduce the turbine speed (reduce the governor setting) to maintain a discharge pressure approximately 50 psig above main feed pump discharge pressure was added. This would cause the governor to be set lower than is required in the technical specification for discharge pressure and flow. No documented reason could be determined as to why this change was made. A Procedural Change Sheet (TP-17) was written on April 20, 1980 that required the governor valve be stroked after securing the pump and the governor then be set to approximately 50 percent.

3. Corrective Action taken

Following identification of the event, a test was performed to determine whether the TDAFP could deliver its intended design flow with the governor set at 50%. The results indicated that the TDAFP would not meet its required performance. Following this test, the governor valve was reset to achieve the TDAFP technical specification requirements. A test was performed to assure that the higher setting would not result in a TDAFP trip. Plant procedures were revised to indicate the new governor setting.

In addition to the above, an accident evaluation investigating the consequences of setting the TDAFP governor at 50% was performed by Westinghouse Electric Corp. This evaluation showed that the 50% setting would have delivered adequate feedwater for all accidents except the feedwater line break. Feedwater line break is considered in the Unit 2 design basis, but not Unit 1. Operator action to increase the control valve setting (which is done from the control room) would have permitted proper auxiliary feedwater flow delivery following the postulated accident.

4. Corrective Action to be Taken to Avoid Further Violation

The corrective actions discussed under the generic actions programs apply to the violation discussed above for the TDAFP.

5. Date when Full Compliance will be achieved

Full compliance was achieved on August 11, 1984 when the governors were set at the proper value and the plant procedures were revised. Long term corrective actions are discussed under the generic corrective action programs.

GENERIC CORRECTIVE ACTION PROGRAMS

A generic program to address the type of concerns raised by the above three violations and other items presented in your November 21, 1984 letter was initiated. This program is under the specific direction of the Vice President Nuclear Operations, the Plant Manager and other key corporate management. The program, presented at the September, 1984 Enforcement Conference and referenced in the Region III November 21, 1984 letter, is summarized below:

a. Operations Department Procedures Consistency with Technical Specifications and Safety Analysis.

A task group is reviewing the procedures dealing with either containment integrity or delivery of emergency water to either the primary or secondary systems.

The review process is expected to be complete by May 1, 1985. Under the program, findings important to safety are being promptly addressed. Less significant findings will be incorporated into the normal two year revision cycle for procedures. This program is being supervised by a Staff Engineer reporting directly to the Vice President, Nuclear Operations.

b. Independent Review of Adherence to Procedures.

A program under the direction of the Manager, Quality Assurance and the Plant Manager, has been developed for AEPSC corporate personnel to monitor implementation and adherence to plant procedures. This independent review is being performed to assure that procedures adequately demonstrate and allow literal compliance with the technical specifications.

This program, which started on September 17, 1984, is being implemented by using AEPSC personnel from the Nuclear Safety and Licensing group, Fuel Management group, and the Quality Assurance Department, as well as Westinghouse personnel. These groups have been verifying that the implementation of plant procedures is in compliance with their associated technical specifications. Under the program, findings important to safety have been reported to plant management for immediate

action. Other findings of a more routine nature are being reviewed for potential incorporation into the procedures or technical specifications.

c. Training in Bases of Technical Specifications to Operating and Non-Operating Personnel

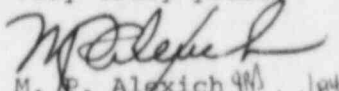
A comprehensive training course consisting of eleven lectures is being developed by AEPSC engineers for presentation to both Reactor Operators and key plant management. The training program under the direction of the Manager, Nuclear Safety and Licensing consists of eleven key areas that relate the accident analyses to the technical specifications. The first training lecture was delivered to the Plant Nuclear Safety Review Committee on November 16, 1984. The same lecture material was presented to plant operations personnel by AEPSC engineers over the next five weeks.

In addition, plans are under way to bring Shift Technical Advisors to the corporate offices to work with corporate engineers on licensing issues and thus enhance their understanding as to the bases of the technical specifications beginning in February, 1985. Final details of this program are currently being developed by the involved Plant and AEPSC Management.

d. Expedite Technical Specifications Updates

An effort is under way to identify technical specifications which require clarification. This effort is corporate wide with the coordination being performed under the direction of the Manager, Nuclear Safety and Licensing. In addition, discussions are under way with the Office of Nuclear Reactor Regulation to develop a joint program to simplify and clarify the technical specification changes for ease of implementation.

Very truly yours,


M. P. Alexich 981
Vice President 12/21/84

/tc

Attachment

cc: John E. Dolan
James G. Keppler
W. G. Smith, Jr. - Bridgman
R. C. Callen
G. Bruchmann
G. Charnoff
NRC Resident Inspector - Bridgman

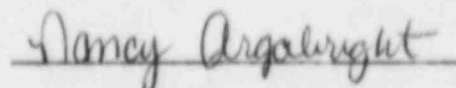
STATE OF OHIO

COUNTY OF FRANKLIN

M. P. Alexich, being duly sworn, deposes and says that he is the Vice President of Licensee Indiana & Michigan Electric Company, that he has read the foregoing response to NRC Inspection Report 50-315/84-18; 50-316/84-20 and knows the contents thereof; and that said contents are true to the best of his knowledge and belief.



Subscribed and sworn to before me this 21st day of December, 1984.



(Notary Public)

NANCY ARGABRIGHT
NOTARY PUBLIC, STATE OF OHIO
MY COMMISSION EXPIRES JUNE 10, 1985