INDIANA & MICHIGAN ELECTRIC COMPANY

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AEP:NRC:0831

Donald C. Cook Nuclear Plant Unit No. 2
Docket No. 50-316
License No. DPR-74
IE REPORT NO. 50-316/83-04 (DPRP)

Mr. James G. Keppler
U. S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

This letter is in response to Mr. W. D. Shafer's letter dated June 20, 1983, which forwarded the subject Inspection Report of the special safety inspections conducted by your staff at the Donald C. Cook Nuclear Plant during the periods January 1 through February 14, 1983, and April 26 through May 20, 1983. The Notice of Violation attached to Mr. Shafer's letter identified four (4) violations. Per my conversation with Mr. D. Boyd of your staff, an extension was granted to us to complete our response to these violations. Our response to these violations is presented below.

ITEM 1

"10 CFR 50 Appendix B, Criterion XI, establishes test control requirements. ANSI N18.7-1976, to which the licensee commits in their FSAR, states in part:

> "A test program shall be established to assure that testing required to demonstrate that the item will perform satisfactory in service is identified and performed in accordance with written test procedures which incorporate or reference the requirements and acceptance limits contained in applicable design documents."

a. Contrary to the above, the licensee's test program failed to assure that THP 4030 STP.214 and OHP 4030 STP.007, the periodic tests used to demonstrate the operability of the containment spray additive system and its components, would demonstrate that these items would perform satisfactorily in service. The system conditions specified in these test procedures varied from the design basis conditions such that test results could not be correlated to the requirements and acceptance limits contained in applicable design documents.

b. Contrary to the above, preoperational test procedure PO-050-514, "Containment Spray System", September 7, 1976, failed to incorporate the requirements contained in the FSAR. The Donald C. Cook FSAR, Section 6.3.2, System Design, states in part "Adequate containment pressure reduction and iodine removal are provided by the Containment Spray System whose components operate...as follows:

"c. During the entire 'A' (footnote deleted) mode and continuing into the 'B' (footnote deleted) mode, NaOH is metered into the spray solution by an eductor system..."

Preoperational Test PO-050-514 only tested the metering of NaOH into the spray solution in the 'B' mode.

This is a Severity Level IV violation. . ."

RESPONSE TO ITEM 1.a

Test procedures THP-4030.STP.214 and OHP-4030.STP.007 were intended to satisfy the surveillance requirements of Technical Specification 4.6.2.2. The tests were intended to verify that the active components (e.g. valves) were functioning properly and that the passive components (e.g. pipes) were not hindered by such things as blockages. At the time the procedures were initiated, they were not intended to demonstrate full system design conditions. The tests must be carried out with the unit in either a normal operating or a refueling mode. This requires that the tests use flow paths available during these modes and also avoiding discharge or dilution of the spray additive tank contents. As a result, the test conditions are not the same as the system design conditions.

As addressed in your inspection report (50-316/83-04), in 1978 the positions of the eductor inlet valves, IMO-212 and IMO-222, were changed while performing a periodic test. The following addresses the actions taken regarding this concern.

1. Corrective Actions Taken and Results Achieved

A revision to Technical Specification 4.6.2.2. was requested. On October 4, 1982, the Technical Specification was revised, changing the eductor test flow from 20 gpm $\pm$ 1 gpm to at least 20 gpm but not to exceed 50 gpm. This eliminated the need to throttle the motive water valves, IMO-212 and 222, in order to hold the flow at 20 gpm.

During normal, accident, and test conditions of the spray additive system, the eductor inlet valves are now in the fully open position. Tests performed on March 15, 1983, show that, with the eductor inlet valves fully open, the simulated eductor flow rate would not exceed the current technical specification limit of 50 gpm.

The revised technical specification not only allows testing to meet the surveillance requirements but also assures the eductor inlet valves are properly aligned to meet their intended design function.

Calculations are available to demonstrate that we are now properly meeting both the technical specification requirements and the design conditions of the spray additive system. This is further assured since the revised technical specification permits us to test the eductor flow rate without having to adjust the eductor inlet valves.

2. Corrective Action to Avoid Further Noncompliance

Surveillance testing is performed in accordance with written procedures, which cannot be deviated from or changed without authorization via a procedure change sheet or revision. Such was the case with test procedure OHP 4030.STP.007, which was a test designed to demonstrate flow through a check valve (i.e., not designed to demonstrate spray additive tank or spray flow). For the consistently successful performance of this test, it was found to be necessary to open valves IMO-212 and IMO-222 beyond their throttled positions. This was pre-determined by other tests to satisfy spray additive tank flow requirements. The opening of IMO-212 and IMO-222 during performance of OHP 4030.STP.007 was incorporated into the procedure by revision. Even during the recent extensive review of these events (by personnel not involved in the pre-op testing and evaluation of these procedures) it was not immediately obvious that having repositioned valves IMO-212 and IMO-222 for the performance of OHP 4030.STP.007 was cause to question the pre-op (and subsequent operability) testing of spray additive tank flow.

Two actions will be taken to avoid further noncompliance of this nature: (1) a synopsis of this event will be prepared for review with site personnel who perform or are responsible for testing and operations. The synopsis will point out the need to carefully evaluate any proposed change to an existing procedure for possible compromise of the test or procedure objective and test result validity. Additionally, although we believe this practice to be firmly in place at the D. C. Cook Plant, the synopsis will re-emphasis the requirement not to change or deviate from the approved procedure without the required prior authorization. This event and its associated required actions will be reviewed by the applicable personnel by September 30, 1983; and (2) the results of all Surveillance Test Procedures (STPs) are subjected to a post-performance data review. The procedure governing this post-performance review will be changed to require review of any procedure changes (TP sheets) written during the conduct of the test for possible effect on test objective or validity of results. Any questions resulting from this post-performance review will be resolved prior to accepting the test results. This action will be completed and in place by September 30, 1983.

3. Date When Full Compliance Will Be Achieved

Full compliance is expected to be achieved by September 30, 1983.

RESPONSE TO ITEM 1.b

Based on our calculations, adequate sodium hydroxide (NaOH) flow will be metered into spray solution during both the A and B modes of the containment spray system. Therefore, additional testing of NaOH flow during the initial phase (A mode) of the containment spray system is not necessary. In light of the above, we believe additional corrective action is not required and that full compliance has been achieved.

ITEM 2

"10 CFR 50 Appendix B, Criterion XVI, establishes requirements for corrective actions. ANSI N18.7-1976, to which the licensee commits in their FSAR, requires that conditions adverse to safety are promptly identified and corrected.

Contrary to the above in October 1978, a condition adverse to safety was identified but was not corrected. When it was determined that the eductor performance under the conditions of quarterly test OHP 4030 STP.007 could not be compared with the performance measured during the preoperational test due to differences in the valve lineup, the valve lineup for OHP 4030 STP.007 was changed in an attempt to obtain valid results. After the procedure changes, the test procedure conditions still varied from the design basis conditions such that test results could not be correlated to the requirements and acceptance limits contained in applicable design documents. Furthermore, no engineering justification was performed to verify whether these actions were proper.

This is a Severity Level IV violation. . ."

RESPONSE TO ITEM 2

1. Corrective Action Taken And Results Achieved

As discussed in the response to Item 1.a. paragraph 2, a post-performance data review will be performed. This review should assure that any identified adverse test conditions will be corrected.

2. Corrective Action Taken To Avoid Further Noncompliance

Verification will be made by the plant QC department to assure that adverse test conditions are being reviewed.

3. Date When Full Compliance Will Be Achieved

Full compliance is expected to be achieved by September 30, 1983.

ITEM 3

"10 CFR 50, Appendix B, Criterion X, states in part, "A program for inspection of activities affecting quality shall be established and executed...to verify conformance with the documented instructions, procedures and drawings for accomplishing the activity.

The licensee committed in Section 1.7 of their Final Safety Analysis Report (FSAR) to ANSI N18.7-1976. Paragraph 5.2.17 of ANSI N18.7-1976 states in part, "...inspections shall be performed by individuals other than those who performed or directly supervised the activity being inspected," and "A program for inspections of activities affecting safety shall be established and executed...to verify conformance with the applicable documented instructions, procedures and drawings."

Contrary to the above:

a. A quality control hold point inspection in procedure **MHP 5021.001.019 for the repair of Unit 2 valve SI-152S, was performed on October 16, 1981, by the Maintenance Supervisor who directly supervised the repair activity.

b. Inspections at quality control hold points in procedure **MHP 5021.001.019 for the repair of Unit 2 valve SI-152S, were performed on October 16, 1981. However, these inspections failed to detect a loose valve part inside the valve body.

This is a Severity Level IV violation. . ."

RESPONSE TO ITEM 3.a

1. Corrective Action Taken and Results Achieved

Administrative controls were issued on January 7, 1983, which will preclude inspection hold points from being performed by individuals who performed or directly supervised the activity being inspected.

2. Corrective Action Taken to Avoid Further Noncompliance

The QC department will verify that hold points are inspected by individuals other than those who performed or directly supervised an activity.

3. Date When Full Compliance Will Be Achieved

Full compliance was achieved on July 30, 1983.

RESPONSE TO ITEM 3.b.

1. Corrective Action Taken and Results Achieved

As stated in NRC Inspection Report 50-316/83-04, the identified loose part was removed and a search for other loose parts was made. Some expected parts were not found. Additional Emergency Core Cooling System (ECCS) valves and piping sections were radiographed in an attempt to locate missing parts or to confirm that they were not lodged in system components. No additional loose parts were identified. Westinghouse was contracted to evaluate the safety significance of the missing parts. Westinghouse concluded that the loose parts are not believed to have the potential to affect the plant's safety function. Other evaluations, of the Emergency Core Cooling System (ECCS) including the extra disc in valve SI-152S, were performed by AEPSC. These evaluations concluded that the calculated reduction in ECCS cooling was still within the safety limits.

2. Corrective Action Taken to Avoid Further Noncompliance

Independent cleanliness inspections are now being performed. Formal training which addresses the criteria for cleanliness inspections is being given to the respective inspection personnel.

3. Date When Full Compliance Will Be Achieved

Full compliance was achieved on January 7, 1983.

ITEM 4

"10 CFR 50, Appendix B, Criterion V states in part, "Activities affecting quality shall be prescribed by documented instructions, procedures or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures and drawings."

The licensee committed in Section 1.7 of their Final Safety Analysis Report (FSAR) to ANSI N45.2.1-1973 and to ANSI N18.7-1976. Paragraph 2.2 of ANSI N45.2.1-1973 states in part, "Cleaning procedures as well as cleanliness procedures or work instructions for cleanliness control practices and inspections, examinations or tests to verify cleanliness of items shall be prepared." Paragraph 5.2.2 of ANSI N18.7-1976 states in part, "Procedures shall be followed...." PMI 2010, "Plant Manager and Department Head Instructions, Procedures and Associated Indexes," Revision 7, October 11, 1978, states in part, "Procedures which are required to be present during the conduct of the activity shall be identified by a double asterisk (**) immediately before the procedure number."

Contrary to the above, the licensee failed to prepare and follow procedures in that,

a. Cleanliness procedures or work instructions for cleanliness inspections have not been prepared. For example, cleanliness inspections performed during the repair of Unit 2 valve SI-152S were performed without the use of procedures or work instructions.

b. PMI-2010 was not followed, in that procedure **MHP 5021.001.019, "Maintenance Procedures for Inspection and Repair of Velan Valves," which was required to be present during the conduct of the activity was not present when repair work was performed on October 16, 1981, on Unit 2 valve SI-152S.

This is a Severity Level V violation. . ."

RESPONSE TO ITEM 4.a

1. Corrective Action Taken And Results Achieved

An instruction establishing QC requirements for nuclear fluid systems has been in existence since March 1974. However, training of personnel to the requirements and criteria for cleanliness inspections

was informal. As of January, 1983, all Chemical Section personnel responsible for performing cleanliness inspections had been formally trained and qualified. Since January, 1983, we have expanded the training and qualification for performing cleanliness inspections to include personnel from other sections/departments. All persons performing cleanliness inspections are required to be qualified by this formal training process.

2. Corrective Action Taken to Avoid Further Noncompliance

In conjunction with paragraph 1, the plant QC department will verify proper implementation of cleanliness inspection requirements.

3. Date When Full Compliance Will Be Achieved

The above training activities were completed in February, 1983. Verification of the implementation of the cleanliness inspection requirements commenced formally on July 1, 1983 and are intended to continue on an ongoing basis.

RESPONSE TO ITEM 4.b.

1. Corrective Action Taken and Results Achieved

Our investigations into this issue did not confirm whether or not procedure **MHP 5021.001.019 was present during the repair of valve SI-152S on October 16, 1981. However, the procedure was not implemented as it was intended. The corrective action taken, with regard to the use of procedure **MHP 5021.001.019 during the repair of valve SI-152S on October 16, 1981, is discussed in our response to Item 3.b. in this letter.

To assure that procedural requirements are fulfilled at future work activities, we instructed the individuals involved with this item that complete compliance to procedural requirements is mandatory. In addition, we will re-emphasize to applicable personnel the requirement that certain procedures must be present during the implementation of the related activities.

2. Corrective Action Taken to Avoid Further Noncompliance

The plant QC department will verify that procedures, when required, are present during the related work activities.

3. Date When Full Compliance Will Be Achieved

Full compliance is expected to be achieved by September 30, 1983.

This document has been prepared following Corporate procedures which incorporate a reasonable set of controls to insure its accuracy and completeness prior to signature by the undersigned.

Very truly yours,

M. P. Alexich
Vice President

MPA/cam

cc: John E. Dolan
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