INDIANA & MICHIGAN ELECTRIC COMPANY
P.O. BOX 16631
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November 18, 1985
AEP:NRC:0961

Donald C. Cook Nuclear Plant Nos. 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
NRC Report Nos. 50-315/85025(DRS) and 50-316/85025(DRS)

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

Dear Mr. Keppler:

This letter is in response to Mr. C. J. Paperiello's letter dated October 18, 1985, which forwarded the subject inspection reports of the routine safety inspection conducted by your staff at the Donald C. Cook Nuclear Plant during the period August 14 through September 5, 1985. The Notice of Violation attached to Mr. Paperiello's letter identified one violation. In addition, we were requested to respond to the unresolved items identified in paragraph 4.d and 7.a of the inspection report. The responses to the violation and the two unresolved items are addressed in the attachment to this letter.

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

RBK 11/18/85

cm

Attachments

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

NRC Violation

"10 CFR 50, Appendix B, Criterion XII states, 'Measures shall be established to assure that tools, gages, instruments, and other measuring and testing devices used in activities affecting quality are properly controlled, calibrated, and adjusted at specified periods to maintain accuracy within necessary limits.'

Contrary to the above, the licensee failed to control the calibrated condition of the flowmeter that was used for the supplemental test for the Containment Integrated Leak Rate Test. A small polyflow fitting was installed in the outlet of the flowmeter which altered the calibrated condition of the flowmeter."

Response to NRC Violation

Corrective Action Taken and the Results Achieved

Upon being notified by the Inspector on August 21, 1985 (approximately 1430 hours) of his concern regarding the calibration status of the flowmeter due to the existence of a small polyflow fitting in the outlet of the flowmeter, the following actions were taken:

a. The performance of the supplemental test using the imposed leak method was placed on hold at about 1455 hours pending resolution of the Inspector's concern.

b. The manufacturer (calibration facility) was contacted at about 1545 hours to determine the "as calibrated" configuration of the flowmeter. The manufacturer stated that the flowmeter was calibrated without any potentially restrictive fitting being installed in the outlet of the flowmeter.

c. The polyflow fitting was removed from the flowmeter and the supplemental test using the imposed leak method was begun at about 1615 hours. The test was successfully completed approximately six hours later on August 21, 1985.

d. The flowmeter was subsequently shipped to an approved calibration facility on September 3, 1985. The "as found" calibration data, dated October 21, 1985, compared favorably with previous calibration data.

Corrective Action To Be Taken To Avoid Further Noncompliance

1. Specific training on the use and application of Float Type flowmeters for personnel associated with the performance of leak rate testing will be completed prior to the upcoming Unit 2 refueling outage.

2. A memo was issued to appropriate plant personnel on November 14, 1985, to ensure that they are cognizant of their responsibility to use and maintain measuring and test equipment in the "as calibrated" configuration.

3. The Integrated Leak Rate Test procedures for Unit 1 and Unit 2 (12THP 4030 STP.202) will be revised prior to their next use to include requirements for verifying test equipment configuration after completion of test preparation activities.

4. Plant Manager Instructions PMI-5060 (Control of Special Tools and Measuring and Test Equipment) and PMI-6030 (Instrument and Control: Maintenance and Calibration) will be revised by February 1, 1986 to include the statements of policy necessary to ensure that plant personnel are aware of the requirement that the "as used" configuration of measuring and test equipment must remain the same as the "as calibrated" configuration and that any deviation from the "as calibrated" requires that an evaluation be performed to ensure calibration status is maintained.

Date When Full Compliance Will Be Achieved

Full compliance was achieved on August 21, 1985, when the polyflow fitting was removed. Plant Manager Instructions (PMI-6030, PMI-5060) and the ILRT procedure will be revised as committed above. The specified training will be completed prior to the start of the 1986 Unit 2 refueling outage.

NRC Unresolved Item 315/85025-03

"The inspector performed a pretest containment inspection to ensure the proper placement of test instrumentation. The inspector noted the close proximity of RTD's to the containment walls. The reason for this was that each RTD had associated with it a junction box in which permanent wiring had been run for the specific purpose of performing a CILRT. The inspector asked the licensee if they had determined sensor location by performing a temperature survey or equivalent as required by ANSI N45.4 - 1972. During the inspection period, the licensee was unable to determine if they had ever performed a temperature survey. In order to resolve this matter, the licensee is requested to submit to Region III information showing either; that a temperature survey was performed or; justification for not conducting a temperature survey. This is considered an unresolved item 315/85025-03(DRS), pending the inspector's review of the licensee's submittal."

Response

The Inspector notes that the proper location of the test temperature instrumentation was not verified by a Temperature Survey. This survey is a requirement of ANSI N45.4-1972.

The Inspectors statement is correct in that we cannot document that a temperature survey was ever performed prior to an ILRT. This is required by section 7.4 of ANSI N45.4-1972. The last sentence of this section states that "Where testing experience with containment structures has established appropriate locations for reference vessels or temperature sensors, temperature surveys may be eliminated for those containment structures of similar proportions." Since Unit 1 & 2 containment structures and temperature sensor locations are virtually identical, it is felt that the intent of this requirement has been met for the following reasons:

A) Temperature Sensor placement has not changed since the initial pre-operational tests. The validity of every test was verified by a supplemental test as required by 10CFR50 Appendix J.

B) The original locations were determined considering the impact of physical barriers and expected temperature gradients.

C) There is no guidance relative to the minimum number of sensors required in either Appendix J to 10CFR50 or ANSI N45.4-1972. ANSI N56.8-1981 does state that no sensor should represent more than 10% of the containment volume. Using this guidance, calculations were performed using different combinations of the 46 temperature sensors used during this test. These combinations were both randomly and systematically selected using 12 to 14 RTDs per calculation.

The instrument Selection Guide (Test System Instrument Error Analysis) was recalculated based on using 14 RTDs vs the 46 RTDs used during the test. The variance between the actual test calculated leak rate and the worst case condition using the various combinations of RTDs was less than ½ of the Instrument Selection Guide Value for 14 RTDs.

It is believed that these calculations verify that the placement of the RTDs was suitable.

D) The Type A supplemental test was performed to verify the accuracy of the Test Instrumentation. The Appendix J acceptance criteria for this test is for the two tests to correlate within 0.25La. The correlation for this set of tests was 0.026La. Again, this verifies the adequacy of the Test Instrumentation.

It is felt that the existing temperature sensor locations for both units are adequate and have been verified by test experience. Future tests will not require temperature surveys.

<u>NRC Unresolved Item 315/85025-06</u>

"The licensee's local leak rate test (LLRT) results for this outage were far in excess of the 0.6 La Technical Specification and Appendix J requirement for the sum of penetration and isolation valve leakages. Additional review revealed that previous refueling outages also had excessive LLRT results. This violation of the 0.6 La limit for penetration and isolation valve leakage and the continuing failure of isolation valves may be indicative of inadequate corrective action taken by the Licensee.

In order to resolve this matter, the licensee is requested to submit a list of isolation valves that have been consistently failing their local leak rate test, a summary of the corrective actions taken to correct the failures, and current plans to preclude the continuing failures of these valves. Review of this information relative to the adequacy of past and planned corrective action will be tracked as an unresolved item (315/85025-06(DRS))."

Response

Maintenance of containment isolation valves has not been ignored. Over the life of the Plant substantial numbers of valves have been replaced or reworked. The attached Table 1 is a summary of all valves which have required repair or replacement since the first set of periodic tests in 1976. Please note that of the 210 valves tested, 106 have leaked at some time. Of these 106 valves, 52 have been successfully replaced or reworked to eliminate leakage. Of the remaining 54 valves, only 11 have leaked on 3 or more ocassions. Of these 11 valves (indicated by an * in Table 1), 5 are check valves, 4 are globe valves on air or air sample systems, and 2 are globe valves on the containment ventilation unit drain lines. As shown in Table 1, during the 1985 Unit 1 refueling outage one of these valves was completely replaced with a new valve, four of the valves had the internals replaced and the remaining 6 valves were repaired or maintained. We will continue to monitor valve performance to determine if further action is required.

Additional information on this topic will be included in the final test report for this ILRT.

TABLE 1

Unit #1 - Leak Rate Test Failures

Valve	76	77	78	79	80	81	82	83	85
NSW-415-1	X	XD		X	X	XD			
NSW-415-2	X	XD		X	X	XD			
NSW-415-3	X	XD		X	X	XD			
NSW-415-4	X	XD		X		XD			
NSW-417-3	X	XD	X			XD			
NSW-417-4	X	XD	X	X		XD			
NSW-419-1		XD		X	X	XD			
NSW-419-2		D	X	X	X	D			
NSW-419-3		XD	X	X	X	XD			
NSW-419-4		D				XD			
NSW-244-1	X	XD		X	X	XD			
NSW-244-2	X	XD		X	X	XD			
NSW-244-3	X	XD		X	X	XD			
NSW-244-4	X	XD		X	X	XD			
WCR-902			X			D			
WCR-903						XD			
WCR-905	X	X	X			XD			
WCR-906		X		X	X	XD			

TABLE 1 (cont'd)

Valve	76	77	78	79	80	81	82	83	85
WCR-907				X	X	D			
WCR-909				X		XD			
WCR-910				X		XD			
WCR-911				X		XD			
WCR-913				X	X	XD			
WCR-914			X	X	X	XD			
WCR-915					X	XD			
WCR-921	X				X	XD			
WCR-922	X	X	X	X	X	XD			
WCR-923						XD			
WCR-925					X	D			
WCR-926				X	X	D			
WCR-929						XD			
WCR-930				X		D			
WCR-931						XD			
WCR-933						XD			
WCR-934				X		XD			
WCR-935						XD			

TABLE 1 (cont'd)

Valve	76	77	78	79	80	81	82	83	85
WCR-945					X	D			
WCR-946			X	X	X	XD			
WCR-947					X	XD			
WCR-958	X					XD			
WCR-965		X				XD			
WCR-966						XD			
WCR-967						XD			
VCR-103					X	XD			XD
VCR-203					X	XD			XD
VCR-104		X	X	X		D			
VCR-204		X	X	X		D			
VCR-105		X	X		X	D			X
VCR-205		X	X		X	D			X
VCR-106	X	X	X			D			
VCR-206	X	X	X			D			
VCR-10				X					
VCR-11				X					
VCR-20				X					
VCR-21				X					

TABLE 1 (cont'd)

Valve	76	77	78	79	80	81	82	83	85
ECR-15	X		X						
* ECR-31		X	X	X					XR
* ECR-32		X		X					XR
ECR-33				X					X
DCR-611							X		
* DCR-620		X		X		X			XR
* DCR-621	X	X		X	X	X			XR
DCR-205				X				X	
DCR-206				X				X	
NCR-105	X								
NCR-106	X								
NCR-252						X			
XCR-101		X	X						
* XCR-102					X		X		X
XCR-103							X		X
* XCR-100		X	X		X				
GCR-314	X								
GCR-301						X			
* CA-181-N						X	X	X	

TABLE 1 (cont'd)

Valve	76	77	78	79	80	81	82	83	85
CA-181-S								X	
* SI-189	X			X			X		X
ICM-260		X							X
ICM-265						X			
ICM-306								X	X
CCR-457							X		X
CCR-460						X			
CCR-462						X			
* CCW-135					X		X		X
CCR-440					X				
CCR-441					X				
CCW-243-72					X		X		
CCW-244-72					X				X
CCW-243-25									X
R-156				X					
R-159				X					
R-157				X					
R-158				X					
N-102	X			X					

TABLE 1 (cont'd)

Valve	76	77	78	79	80	81	82	83	85
* N-159		X		X	X				XR
N-160						X	XR	XP	
QCM-250							X		
QCM-350							X		
SF-159							X		X
SF-160							X		X
CS-321				X					
CS-442-3								X	
DW-275				X					
PPP-303									X
NS-357									X
* SM-1	X			X			X		X
SM-2					X				

NOTE: X Denotes valve repaired
R Denotes valve replaced or valve internals replaced
D Denotes valve replaced with valve of different design or design change to existing valve
P Denotes change to piping
* Denotes problem valves

8.(DRs)