

Docket Nos. 50-315
and 50-316

February 5, 1985

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Mr. John Dolan, Vice President
Indiana and Michigan Electric Company
c/o American Electric Power Service Corporation
1 Riverside Plaza
Columbus, Ohio 43216

Dear Mr. Dolan:

In our review of the Donald C. Cook Nuclear Station pump and valve testing program we have identified additional information needed to complete this task. The questions and comments on your program are enclosed. As with other licensees, we would like to establish a meeting to resolve the questions. On the average, these meetings have taken three days and are held at our Bethesda Offices. Please review our request for additional information and confirm a meeting date with this office.


Sincerely,

/s/SVarga

Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Enclosure:
As stated

cc w/enclosure:
See next page


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DWigginton;ps SVarga
2/4/85 2/6/85

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Plant, Units 1 and 2

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D. C. COOK, UNITS 1 & 2

VALVES

A. General Questions and Comments

1. The Figure 2 Note that states check valve exercising CF-2 and CF-3 need not be done more often than every nine months in the case of frequent cold shutdowns should be changed to not more often than once every 3 months in the case of frequent cold shutdowns.
2. A limiting value of full-stroke time should be assigned to each power operated valve in the IST program.
3. Are all valves that are Appendix J, Type C, leak tested included in the IST program as Category A or A/C?
4. What is the inspection interval for valves that are identified in the IST program for disassembly for internal inspection on a sampling basis?
5. Is the valve leak testing designated SLT-1 in the IST program performed in accordance with Section XI, IWV-3420?
6. What is the frequency of the SLT-2 testing identified in the IST program?
7. Are all valves that are categorized E in the IST program locked or sealed in position?

B. Main Steam System

1. Do valves MS-108-2 and -3 perform any safety function in the closed position? Are these valves individually full-stroke exercised quarterly?
2. Can valves MRV-210, -220, -230, and -240 be partial-stroke exercised during power operation?
3. Are valves MRV-213, -223, -233, and -243, steam generator power operated reliefs, utilized to satisfy Reactor Systems Branch Technical Position 5-1?

4. The auxiliary feed pump trip and throttle valve should be stroke timed in accordance with the Section XI Category B requirements unless specific relief from those requirements is requested.

C. Feedwater System

1. Can check valves FW-118-1, -2, -3, and -4 be verified to shut by utilizing existing upstream stop valves, drain valves, and pressure indication?
2. How are valves FW-153 and FW-160 verified shut quarterly?
3. Provide the technical justification for not full-stroke exercising check valves FW-124, FW-128, FW-159, and FW-161 quarterly.
4. What alternate test methods have been considered to full-stroke exercise check valves FW-134 and FW-135? How was it determined that a flow rate of 700 gpm is sufficient to full-stroke exercise these valves?
5. How are check valves FW-149 and FW-150 individually full-stroke exercised?
6. Are the motor driven auxiliary feed pumps used to feed the steam generators during each startup and shutdown? (Reference Note 2, i.e., are valves FW-132-1-4 full-stroke exercised at a cold shutdown frequency?)
7. What alternate methods have been investigated to full-stroke exercise check valves FW-138-1, -2, -3, and -4? The NRC Staff position is that relief will not be granted to never full-stroke exercise a valve whose operability is important to safety.
8. Are valves FW-125, -126, and -127 locked or sealed in position? If so, then they should be included in the IST program as Category E valves.

D. Essential Service Water System

1. Do the following valves perform any safety function in the closed position?

<u>Unit 1</u>	<u>Unit 2</u>
ESW-111	ESW-141
ESW-112	ESW-142
ESW-113	ESW-143
ESW-114	ESW-144
ESW-101-E	ESW-102-E
ESW-101-W	ESW-102-W

2. Provide a more detailed technical justification for not full-stroke exercising valves WM0-753, WM0-754, and WM0-744 quarterly.
3. Is the position of the following Category E valves verified before and after being operated? Should the "Test Performed" column indicate OC-1 instead of EF-2?

ESW-168-S	ESW-170-S
ESW-168-N	ESW-170-N
ESW-169-S	ESW-171-S
ESW-169-N	ESW-171-N

4. Do the following valves have a required fail-safe position? If so, then they should be tested in accordance with Section XI, IWB-3410(e).

<u>Unit 1</u>	<u>Unit 2</u>
WRV-721	WRV-722
WRV-723	WRV-724
WRV-725	WRV-726
WRV-727	WRV-728

5. Is the position of the following Category E valves verified before and after being operated? Should the "Test Performed" column indicate OC-1 instead of EF-2?

<u>Unit 1</u>	<u>Unit 2</u>
ESW-115	ESW-145
ESW-243	ESW-240
ESW-109	ESW-243

6. The following Category B valves should be stroke timed during quarterly testing unless specific relief is requested from the stroke timing requirements of Section XI.

<u>Unit 1</u>	<u>Unit 2</u>
WRV-761	WRV-763
WRV-762	WRV-764
WRV-766	WRV-768
WRV-767	WRV-769
WRV-771	WRV-773
WRV-772	WRV-774
WRV-776	WRV-778
WRV-777	WRV-779

E. Non-essential Service Water System

1. Would failure in the closed position while testing either the supply or return valve from the reactor coolant pumps motor air coolers result in damage to the motors or require pump shutdown?

F. Compressed Air System

1. Should valves PA-342 and PA-343 be Categorized A/C instead of C?
2. Provide a more detailed explanation of the consequences of a loss of control air to containment as discussed in Note 1.

G. Station Drainage System

1. Review the safety function of the 1/2" check valve located at coordinates K-9 to determine if it should be included in the IST program.

H. Reactor Coolant System

1. How are valves NS0-021, -022, -023, and -024 stroke timed? Do any alternate methods exist to verify valve position in accordance with Section XI, IWV-3300?
2. How are valves PW-275 and N-159 verified shut during cold shutdowns?
3. Provide a more detailed technical justification why valves CS-442-1, -442-2, -442-3, and -442-4 cannot be exercised at the Code specified frequency.

4. How are valves NSO-061, -062, -063, and -064 stroke timed? Do any alternate methods exist to verify valve position in accordance with Section XI, IWV-3300?
5. Review the safety function of valve RC-124 at location J-7 to determine if it should be included in the IST program and Categorized E.

I. CVCS - Reactor Letdown and Charging System

1. Why have valves CS-297-E and CS-297-W been categorized A/C rather than C?
2. Are valves QMO-225 and QMO-226 ever required to perform a safety function in the closed position?
3. Provide a more detailed technical justification why valve SI-185 cannot be full-stroke exercised during cold shutdowns.
4. Why have valves CS-299-E and CS-299-W been categorized A/C rather than C? Provide the specific technical justification for not full-stroke exercising these valves during power operation or cold shutdowns.
5. Is pressurizer auxiliary spray from the CVCS utilized to satisfy Reactor Systems Branch Technical Position RSB 5-1? (Reference exercising CS-321 and CS-325)
6. Are valves QMO-200 and QMO-201 full-stroke exercised during each cold shutdown, not more often than each three months? Are these valves required to change position to perform a safety function?
7. What is the safety function of valves CS-328L1, -328L4, -329L1, and 329L4 if they do not perform a pressure boundary isolation function?
8. Review the safety function of valves CS-296-E and CS-296-W to determine if they should be included in the IST program and categorized E.
9. Provide a more detailed technical justification for not full-stroke exercising valves QCM-250 and QCM-350 during power operation.

J. CVCS - Boron Makeup System

1. What is the safety function flow path in this system? Why are some valves locked or sealed while others in the same line are not?
2. Provide a more detailed technical justification for not full-stroke exercising valves PW-266 and PW-267 during cold shutdowns.

K. Component Cooling System

1. Provide a more detailed technical justification for not full-stroke exercising valve CCW-135 during cold shutdowns.
2. What is the P&ID location of CCW-170 (Unit 2)?
3. Are valves CCM-430, CCM-431, CCM-432, and CCM-433 presently being leak rate tested to Appendix J requirements?
4. If leakage is important for valves CCR-440 and CCR-441 to perform their safety function, then these valves must be leak tested in accordance with Section XI, IWV-3420.

L. Spent Fuel Pit Cooling and Cleanup System

1. Any valve that performs a function important to safety must be included in the IST program and tested in accordance with Section XI unless specific relief from the testing requirements is requested.

M. Nuclear Sampling System

1. Do any of the valves listed (Sheet 4 of 4) perform a safety function in the open position?

N. Post-Accident Liquid and Gas Sampling

1. Do any of the valves listed perform a safety function in the open position?

O. Emergency Core Cooling - SIS

1. How is valve SI-126 verified shut quarterly?

2. Provide the specific technical justification for not full-stroke exercising valve SI-101 at the Code specified frequency.
3. Review the safety function of the following valves to determine if they should be included in the IST program and categorized E.

SI-103S
SI-103N

SI-111S
SI-111N

SI-106S
SI-106N

P. Emergency Core Cooling - RHR

1. Provide the specific technical justification for not full-stroke exercising valves RH-108E and RH-108W quarterly.
2. Provide a more detailed technical justification for not full- or partial-stroke exercising valve SI-148 during power operation or cold shutdowns.
3. Is valve GCR-314 full-stroke exercised during power operation in Unit 2?
4. Do valves ICM-129 and IMO-128 perform a pressure boundary isolation function? Should valve IMO-128 be categorized A?
5. Valves that do not perform a function important to safety, i.e., ICM-111, may be included in the IST program at the owner's discretion, however, the NRC will not review requests for relief for those valves.
6. Review the safety function of valves IMO-330 and -331 to determine if they should be categorized A.
7. Review the safety function of valves ICM-311 and -321 to determine if they should be categorized A.
8. How are the following valves full-stroke exercised during cold shutdowns?

SI-161-L1
SI-161-L2
SI-161-L3
SI-161-L4

SI-170-L1
SI-170-L2
SI-170-L3
SI-170-L4

SI-158-L1
SI-158-L2
SI-158-L3
SI-158-L4

9. Why are valves SI-170-L2, -170-L3, RH-133, and RH-134 the only valves identified as pressure boundary isolation valves that have a leakage limit specified?
10. Provide the specific technical justification for not measuring the stroke time of valves IM0-315, -316, -325, and -326.
11. Would failure in a nonconservative position while exercising valves IM0-315, -316, -325, and -326 during power operation result in less than the minimum number of injection flow paths as required by the FSAR?
12. Review the safety function of the following valves to determine if they should be included in the IST program and categorized E.

RH-104-E(H-9)	RH-113-E(K-8)	RH-116-E(K-4)
RH-104-W(L-9)	RH-113-W(N-8)	RH-116-W(N-4)
13. Review the safety function of valves IRV-310 and IRV-320 to determine if they should be included in the IST program and categorized B.

Q. Containment Spray System

1. Review the safety function of the following valves to determine if they should be included in the IST program and categorized E.

CTS-116(M-7)	CTS-105-E(J-8)
SI-151(L-7)	CTS-105-W(M-8)
SI-152(L-7)	CTS-139-E(G-9)
CTS-119-E(H-8)	CTS-139-W(J-9)
CTS-119-W(K-8)	

R. Ice Condenser Refrigeration System

1. Provide the specific technical justification for not full-stroke exercising valves R-156 and R-157 quarterly.

S. Containment Ventilation System

1. Note 2 does not agree with Note 3 where the containment radiation monitor operational requirements are concerned. Which note is correct?

T. Control Room Ventilation System

1. Do valves VRV-315 and -325 have a required fail safe position?

U. Emergency Diesel Generator Systems

1. Review the safety function of valves DF-101 and -102 to determine if they should be included in the IST program and categorized E.
2. Do valves QT-114 and -132 have a required fail safe position?
3. Review the safety function of valves XRV-220, -221, and -222 to determine if they should be categorized B. Provide the specific technical justification for not measuring the stroke time of these valves. Are valves XRV-221 and -222 individually verified open when they are exercised?
4. Review the safety function of the following valves to determine if they should be included in the IST program and categorized as indicated.

Category B

XRV-240

Category C

DG-139
DG-140
DG-141
DG-142

PUMPS

A. Miscellaneous Systems

1. Review the safety function of the spent fuel pit cooling pumps to determine if they should be included in the IST program and tested in accordance with Section XI.
2. Review the safety function of the diesel fuel oil transfer pumps to determine if they should be included in the IST program and tested in accordance with Section XI.
3. The present NRC staff position is that pump testing must be conducted at the monthly testing frequency if the 1974 Edition of the Code is utilized for the IST program.
4. Provide the alert and required action range values of vibration velocity utilized in the pump vibration monitoring program.