INDIANA & MICHIGAN ELECTRIC COMPANY

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July 19, 1984

AEP:NRC:0856A

Donald C. Cook Nuclear Plant Unit Nos. 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
NUREG-0737, TECHNICAL SPECIFICATION CHANGES (GENERIC LETTER NO. 83-37)

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Denton:

This letter and its attachments transmit proposed Technical Specification (T/S) change requests associated with some of the requirements set forth in NUREG-0737. More specifically, this letter responds to Generic Letter No. 83-37, which requested that we: (1) review the NUREG-0737 items which require T/S scheduled for implementation after December 31, 1981, and (2) transmit an application for a license amendment for those T/S which are not consistent with the guidance provided in Enclosure 1 of G.L. 83-37. It should be noted that we provided you with our proposed Tech Specs for the Reactor Coolant System Vents in our letter nos. AEP:NRC:0584B and AEP:NRC:0584C.

The proposed specifications are modeled after those suggested in Generic Letter 83-37, but include plant-specific provisions to accommodate the actual mechanical and electrical systems installed at the Donald C. Cook Nuclear Plant.

Attachment No. 1 to this letter contains the reasons for the proposed changes, or the justification for not making changes, to our Technical Specifications. Attachment No. 2 contains the proposed Technical Specifications.

Based on our review, the Technical Specifications proposed by this letter will not result in an increase in the probability or consequences of a previously analyzed accident and will not reduce a safety margin. The results of the changes are consistent with the guidance defined as acceptable by the NRC in NUREG-0737 and Generic Letter 83-37. Though consistent with the guidance, some of the proposed changes vary from the guidance because of the Plant's specific design. Due to the consistency with the NRC guidance, we have concluded that these changes will not involve a significant hazards consideration as defined in 10 CFR 50.92. In addition, we believe that the proposed changes will enhance safety and therefore will not adversely impact the environment.

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These proposed changes have been reviewed by the Plant Nuclear Safety Review Committee (PNSRC) and will be reviewed by the Nuclear Safety and Design Review Committee (NSDRC) at their next scheduled meeting.

In compliance with the requirements of 10 CFR 50.91(b)(1), a copy of this letter and its attachments have been transmitted to Mr. R. C. Callen of the Michigan Public Service Commission.

We believe that the fees transmitted with our letter no. AEP:NRC:0584B also cover this transmittal request for NRC review. As such, we interpret 10 CFR 170.22 as requiring that no fee accompany this submittal.

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/dew

Attachments

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

ATTACHMENT NO. 1 TO AEP:NRC:0856A

DONALD C. COOK NUCLEAR PLANT UNIT NOS. 1 AND 2

REASONS FOR PROPOSED

TECHNICAL SPECIFICATION CHANGES

1. Reactor Coolant System Vents (II.B.1)

This item was covered in our letters AEP:NRC:0584B (i.e., surveillance requirements) dated January 20, 1984, and AEP:NRC:0584C (i.e., limiting condition for operation) dated March 15, 1984.

2. Post-Accident Sampling (II.B.3)

The guidance given in Enclosure 1 to Generic Letter No. 83-37 states that:

> "Licensees should ensure that their plant has the capability to obtain and analyze reactor coolant and containment atmosphere samples under accident conditions. An administrative program should be established, implemented and maintained to ensure this capability. The program should include:
>
> a. training of personnel
> b. procedures for sampling and analysis, and
> c. provisions for maintenance of sampling and analysis equipment
>
> It is acceptable to the Staff, if the licensee elects to reference this program in the administrative controls section of the Technical Specifications and include a detailed description of the program in the plant operation manuals. A copy of the program should be easily available to the operating staff during accident and transient conditions."

We are proposing a new T/S 6.8.4, which is nearly identical to the sample T/S given in Enclosure 3 of the Generic Letter. Our proposal differs from the T/S contained in Enclosure 3 because of slight format and editorial changes. We believe these changes are necessary to more clearly describe our program.

This T/S also covers NUREG-0737 Item II.F.1.2 on Sampling and Analysis of Plant Effluents. More specifically, it addresses the program to collect and analyze or measure representative samples of radioactive iodines and particulates in plant gaseous effluents during and following an accident.

Page 6-14a has been added to accommodate this change.

3. Long-Term Auxiliary Feedwater System Evaluation (II.E.1.1)

The guidance given in Generic Letter No. 83-37 states that:

> "The objective of this item is to improve the reliability and performance of the auxiliary feedwater (AFW) system. Technical Specifications depend on the results of the licensee's evaluation and staff review of each plant. The limiting conditions of operation (LCO) and surveillance requirements for the AFW system should be similar to safety-related systems. Typical generic Technical Specifications are provided in Enclosure 3. These

specifications are for a plant which has three auxiliary feedwater pumps. Plant specific Technical Specifications could be established by using the generic Technical Specifications for the AFW systems."

Technical Specification (T/S) 3.7.1.2 addresses the Auxiliary Feedwater System. In our letter AEP:NRC:0433 dated May 10, 1983, we proposed changes to T/S 3.7.1.2 for both Units 1 and 2. Those proposed changes would make these T/S consistent with our Inservice Testing Program. We believe that both our existing (i.e., approved) T/S and those proposed in AEP:NRC:0433 are adequate to demonstrate the reliability and operability of the auxiliary feedwater (AFW) system. Therefore, we are not proposing any additional changes to T/S 3.7.1.2 at this time.

4. Noble Gas Effluent Monitors (II.F.1.1)

The guidance given in Generic Letter No. 83-37 states that:

"Noble gas effluent monitors provide information, during and following an accident, which are considered helpful to the operator in accessing the plant condition. It is desired that these monitors be operable at all times during plant operation, but they are not required for safe shutdown of the plant. In case of failure of the monitor, appropriate actions should be taken to restore its operational capability in a reasonable period of time. Considering the importance of the availability of the equipment and possible delays involved in administrative controls, 7 days is considered to be the appropriate time period to restore the operability of the monitor. An alternate method for monitoring the effluent should be initiated as soon as practical, but no later than 72 hours after the identification of the failure of the monitor. If the monitor is not restored to operable conditions within 7 days after the failure a special report should be submitted to the NRC within 14 days following the event, outlining the cause of inoperability, actions taken and the planned schedule for restoring the system to operable status."

Consistent with the above guidance, we are proposing new T/S Tables 3.3-6A and 4.3-3A for Unit Nos. 1 and 2 for our Noble Gas Effluent Monitors. In addition, we have commensurately revised T/S Tables 3.3-11 and 4.3-7 for Unit No. 1 and T/S Tables 3.3-10 and 4.3-10 for Unit No. 2 (i.e., added instrument 17 to each Table). It should be noted that in the preparation of these T/S Tables, the guidance of Generic Letter No. 83-37 could not be strictly adhered to because we had to consider the existing format of the Technical Specifications as they relate to the functions of the specific systems installed at our Plant.

In addition, we are proposing to maintain the current Action Statements for T/S 3.3.3.8 for Unit 1 and 3.3.3.6 for Unit 2.

5. Sampling and Analysis of Plant Effluents (II.F.1.2)

The guidance given in Generic Letter No. 83-37 states that:

"Each operating nuclear power reactor should have the capability to collect and analyze or measure representative samples of radioactive iodines and particulates in plant gaseous effluents during and following an accident. An administrative program should be established, implemented and maintained to ensure this capability. The program should include:

a. training of personnel
b. procedures for sampling and analysis, and
c. provisions for maintenance of sampling and analysis equipment

It is acceptable to the Staff, if the licensee elects to reference this program in the administrative controls section of the Technical Specifications and include a detailed description of the program in the plant operation manuals. A copy of the program should be readily available to the operating staff during accident and transient conditions."

As noted above in Item 2 to this Attachment, we have prepared a new T/S 6.8.4, which is nearly identical to the sample T/S given in Enclosure 3 of the Generic Letter. It is our belief that this specification is consistent with the NUREG guidance.

6. Containment High-Range Radiation Monitor (II.F.1.3)

The guidance given in Generic Letter No. 83-37 states that:

"A minimum of two in-containment radiation-level monitors with a maximum range of 10^8 rad/hr (10^7 R/hr for photon only) should be operable at all times except for cold shutdown and refueling outages. In case of failure of the monitor, appropriate actions should be taken to restore its operational capability as soon as possible. If the monitor is not restored to operable condition within 7 days after the failure, a special report should be submitted to the NRC within 14 days following the event, outlining the cause of inoperability, actions taken and the planned schedule for restoring the equipment to operable status.

Typical surveillance requirements are shown in Enclosure 3. The setpoint for the high radiation level alarm should be determined such that spurious alarms will be precluded. Note that the acceptable calibration techniques for these monitors are discussed in NUREG-0737."

In conjunction with Change No. 4 above, we have prepared T/S Tables 3.3-6A and 4.3-3A for Unit Nos. 1 and 2 which will contain the requirements for our containment high-range radiation monitor. In

addition, we have revised T/S Tables 3.3-11 and 4.3-7 for Unit No. 1 and T/S Tables 3.3-10 and 4.3-10 for Unit No. 2. Again, it should be noted that in the preparation of these T/S Tables the guidance of Generic Letter No. 83-37 could not be strictly adhered to because we had to consider the existing format of the Technical Specifications as they relate to the function of the specific systems installed at our Plant.

7. Containment Pressure Monitor (II.F.1.4)

The guidance given in Generic Letter No. 83-37 states that:

"Containment pressure should be continuously indicated in the control room of each operating reactor during Power Operation, Startup, and Hot Standby modes of operation. Two channels should be operable at all times when the reactor is operating in any of the above mentioned modes. Technical Specifications for these monitors should be included with other accident monitoring instrumentation in the present Technical Specifications. Limiting conditions for operation (including the required Actions) for the containment pressure monitor should be similar to other accident monitoring instrumentation included in the present Technical Specifications. Typical acceptable LCO and surveillance requirements for accident monitoring instrumentation are included in Enclosure 3."

Presently, our T/S Tables 3.3-11 and 3.3-10 for Units 1 and 2, respectively, contain the requirement to have a minimum of two containment pressure channels operable, where the sample T/S require only one channel to be operable. Our T/S Tables 4.3-7 and 4.3-10 for Units 1 and 2, respectively, contain surveillance requirements equivalent to those in the sample T/S. Therefore, we are not proposing changes to these Tables.

8. Containment Water Level Monitor (II.F.1.5)

The guidance given in Generic Letter No. 83-37 states that:

"A continuous indication of containment water level should be provided in the control room of each reactor during Power Operation, Startup, and Hot Standby modes of operation. At least one channel for narrow-range and two channels for wide-range instruments should be operable at all times when the reactor is operating in any of the above modes. Narrow-range instruments should cover the range from the bottom to the top of the containment sump. Wide-range instruments should cover the range from the bottom of the containment to the elevation equivalent to a 600,000 gallon (or less if justified) capacity.

Technical Specifications for containment water level monitors should be included with other accident monitoring instrumentation in the present Technical Specifications. LCOs (including the required Actions) for wide-range monitors should be similar

to other accident monitoring instrumentation included in the present Technical Specifications. LCOs for narrow-range monitor should include the requirement that the inoperable channel will be restored to operable status within 30 days or the plant will be brought to Hot Shutdown condition as required for other accident monitoring instrumentation. Typical acceptable LCO and surveillance requirements for accident monitoring instrumentation are included in Enclosure 3."

We are proposing that T/S Tables 3.3-11 and 3.3-10 for Units 1 and 2, respectively, be revised to include the requirement that at least one narrow-range channel and one wide-range channel of the containment water level monitoring instrumentation be OPERABLE during MODES 1, 2, and 3. In addition, we are proposing that T/S Tables 4.3-7 and 4.3-10 for Units 1 and 2, respectively, be revised to include the surveillance requirements for these channels. We believe that the proposed changes are consistent with, but not identical to, the sample T/S in Enclosure 3.

9. Containment Hydrogen Monitor (II.F.1.6)

The guidance given in Generic Letter No. 83-37 states that:

"Two independent containment hydrogen monitors should be operable at all times when the reactor is operating in Power Operation or Startup modes. LCO for these monitors should include the requirement that with one hydrogen monitor inoperable, the monitor should be restored to operable status within 30 days or the plant should be brought to at least a hot standby condition within the next 6 hours. If both monitors are inoperable, at least one monitor should be restored to operable status within 72 hours or the plant should be brought to at least hot standby condition within the next 6 hours. Typical surveillance requirements are provided in Enclosure 3."

We are proposing an amendment to our current T/S 3/4.6.4.1 for both Units 1 and 2. As required by Regulatory Guide 1.97, we have installed hydrogen monitors that have ranges of 0 to 30 volume percent hydrogen. Because of this wide operating range, we are proposing to use nominal four and fifteen volume percent hydrogen as our sample gas, rather than one and four volume percent hydrogen, for our CHANNEL CALIBRATION, as suggested in Enclosure 3 to Generic Letter 83-37. We believe this will provide us with a better calibration .

10. Instrumentation for Detection of Inadequate Core Cooling (II.F.2)

The guidance given in Generic Letter No. 83-37 states that:

"Subcooling margin monitors, core exit thermocouples, and a reactor coolant inventory tracking system (e.g., differential

pressure measurement system designed by Westinghouse, Heated Junction Thermocouple System designed by Combustion Engineering, etc.) may be used to provide indication of the approach to, existence of, and recovery from inadequate core cooling (ICC). These instrumentation should be operable during Power Operation, Startup, and Hot Shutdown modes of operation for each reactor.

Subcooling margin monitors should have already been included in the present Technical Specifications. Technical Specifications for core exit thermocouples and the reactor coolant inventory tracking system should be included with other accident monitoring instrumentation in the present Technical Specifications. Four core-exit thermocouples in each core quadrant and two channels in the reactor coolant tracking system are required to be operable when the reactor is operating in any of the above mentioned modes. Minimum of two core-exit thermocouples in each quadrant and one channel in the reactor coolant tracking system should be operable at all times when the reactor is operating in any of the above mentioned modes. Typical acceptable LCO and surveillance requirements for accident monitoring instrumentation are provided in Enclosure 3."

The suggested T/S for the core exit thermocouples and the reactor vessel level indication system have not been included at this time since the program for the thermocouples and indication system is still under development. We plan to advise you of the status of these Technical Specifications as development nears completion.

11. Control Room Habitability Requirements (III.D.3.4)

The guidance given in Generic Letter No. 83-37 states that:

"Licensees should assure that control room operators will be adequately protected against the effects of the accidental release of toxic and/or radioactive gases and that the nuclear power plant can be safely operated or shutdown under design basis accident conditions. If the results of the analyses of postulated accidental release of toxic gases (at or near the plant) indicate any need for installing the toxic gas detection system, it should be included in the Technical Specifications. Typical acceptable LCO and surveillance requirements for such a detection system (e.g. chlorine detection system) are provided in Enclosure 3. All detection systems should be included in the Technical Specifications.

In addition to the above requirements, other aspects of the control room habitability requirements should be included in the Technical Specifications for the control room emergency air cleanup system. Two independent control room emergency air cleanup systems should be operable continuously during all modes of plant operation and capable of meeting design requirements. Sample Technical Specifications are provided in Enclosure 3."

We are proposing a new T/S 3.3.3.11 on the chlorine detection system for both Units 1 and 2 T/S to assure that the control room operators will be

adequately protected against the effects of accidental release of toxic gases (specifically chlorine) at or near the plant. T/S 3/4.3.3.11 follows the sample T/S given in Enclosure 3 to Generic Letter No. 83-37, except for the following deviations:

i. We do not have two independent chlorine detection systems; we have one chlorine detector located in the fresh air inlet duct to the control room ventilation system. As such, we have changed the requirement from two independent chlorine detection systems to one chlorine detection system. In addition, we have removed action (a) from the sample T/S since it is no longer applicable [i.e., since we have only one detection system, action (b) is sufficient].

ii. Our chlorine detection system will trigger an alarm in the control room when the chlorine concentration of the air being vented into the control room ventilation system is greater than the alarm setpoint. When this alarm occurs, the operators have been instructed to immediately place the control room emergency ventilation system in a recirculation mode. There is no automatic trip function connected with this detection system. We have, therefore, eliminated the reference to a trip setpoint.

iii. Because a "qualitative assessment of channel behavior during operation by observation" is not possible (i.e., we do not have another channel to compare this one to, and there are no other instruments which measure the same parameter), we have removed the CHANNEL CHECK requirement from this T/S.

iv. We have also made a nomenclature change to the surveillance requirement. More specifically, we have changed "ANALOG CHANNEL OPERATIONAL TEST" to "CHANNEL FUNCTIONAL TEST."

In addition, we are proposing that T/S bases section 3/4.3.3.11, entitled "CHLORINE DETECTION SYSTEMS" be added. Page B3/4 3-4 is proposed for Unit 2 to accommodate this addition. Since Enclosure 3 to Generic Letter No. 83-37 did not supply us with any guidelines with regard to this item, we used the guidelines of NUREG-0452, Revision 4, "STANDARD TECHNICAL SPECIFICATIONS FOR WESTINGHOUSE PRESSURIZED WATER REACTORS," for the preparation of this section.

We are also proposing that T/S 3.7.5.1 for the control room emergency ventilation system be upgraded to include the requirement that this system be operable in all MODES instead of just MODES 1 through 4. With regard to this T/S change, we could not strictly follow the sample T/S given in Enclosure 3 to Generic Letter No. 83-37 because, as detailed in our FSAR (Section 9.10), we have a control room ventilation system which is of an earlier design than the one which would meet the detailed requirements included in the suggested T/S.