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 DENTON, H.R. Office of Nuclear Reactor Regulation, Director

SUBJECT: Forwards proposed plant sys Tech Specs & license conditions  
 incorporating Category A lessons learned requirements, in  
 response to NRC 800702 ltr.

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December 10, 1980  
AEP:NRC:00449

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Donald C. Cook Nuclear Plant Units 1 and 2  
Docket Nos. 50-315 and 50-316  
License Nos. DPR-58 and DPR-74  
Lessons Learned Technical Specifications

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

Dear Mr. Denton:

This is in response to Mr. D. Eisenhower's letter dated July 2, 1980 proposing Technical Specifications and certain license conditions for the Category "A" Lessons Learned (NUREG-0578) requirements implemented at the Donald C. Cook Nuclear Plant.

The Cook Plant has been operating with Standard Technical Specifications (STS). As such, many of the changes suggested in the model STS for the Lessons Learned items contained in Mr. Eisenhower's letter are already included in the Cook Plant Technical Specifications.

Our proposed Technical Specifications (Attachment 2 and 3) are based on revisions to the existing Cook Plant Technical Specifications for Units 1 and 2 and where applicable, updated to include the scope of the Category "A" items as contained in the Safety Evaluation Report (SER) for Cook Plant compliance with the Category "A" requirements, issued on March 20, 1980. No revisions are being proposed to address wording differences or format deviations from those contained in the model STS for the Lessons Learned items.

Attachment 1 contains a brief discussion of each of the Technical Specification revisions proposed in Attachment 2 and 3. Attachment 4 contains the proposed license conditions for Units 1 and 2 of the Cook Plant. In all instances the content of the model STS of Mr. Eisenhower's letter was used as guidance in the preparation of the Cook Plant specific Technical Specifications.

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Mr. Harold R. Denton  
Director

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AEP:NRC:00449

The proposed Technical Specification revisions and license conditions contained in the Attachments to this letter have been reviewed by the PNSRC and the NSDRC as required by our Technical Specifications. These reviews concluded that the proposed Technical Specification revisions and license conditions do not constitute an unreviewed safety question and will not adversely affect the health and safety of the public.

I&M Electric Co. interprets 10 CFR 170 as requiring that no fee accompany this submittal.

Very truly yours,

A handwritten signature in dark ink, appearing to read 'R. S. Hunter', with a stylized, cursive script.

R. S. Hunter  
Vice President

cc: R. C. Callen  
G. Charnoff  
R. S. Hunter  
R. W. Jurgensen  
D. V. Shaller - Bridgman  
NRC Region III Resident Inspector at Cook Plant - Bridgman



ATTACHMENT 1 TO AEP:NRC:00449

This attachment briefly describes the Technical Specification revisions contained in attachments 2 and 3 to AEP:NRC:00449. The revisions to existing Cook Plant Technical Specifications are denoted by bars in the right hand margin. The appropriate revisions to the Bases are also included in these attachments. We are ordering these Technical Specifications changes in a manner consistent with the numbering of our Technical Specifications.

Auxiliary Feedwater System Specifications

The following existing Technical Specifications have been revised to incorporate the automatic initiation requirements into the Engineered Safety Feature Actuation System specifications as set forth in the model Technical Specifications of Mr. Eisenhower's letter.

a) Specification 3/4.7.1.2 - Units 1 and 2

(Page 3/4 7-6 of both Units)

We have removed the automatic starting signals listed under Surveillance Requirement 4.7.1.2.b replacing them with the appropriate ESF actuation test reference to be performed under Specification 3/4.3.2. This is in accordance with the model Technical Specifications of Mr. Eisenhower's letter.

b) Specification 3/4.3.2 - Units 1 and 2

Tables 3.3-3, 3.3-4, 3.3-5 and 4.3-2 of both Units 1 and 2 have been revised to incorporate into them the automatic initiation requirements for auxiliary feedwater. Basically, the requirements formerly in Specification 4.7.1.2.b have been incorporated into their appropriate section of Specification 3/4.3.2. This includes a) the LCO for the instrumentation, b) the setpoints/allowable values, where applicable, c) the system response times and d) the appropriate surveillance requirements.

Our existing Technical Specifications 3/4.3.2 (units 1 and 2) including the recent amendments for "Grid Degraded Voltage" have already put many of the AFW requirements contained in the model Technical Specifications of Mr. Eisenhower's letter into the Cook Plant Technical Specifications. As such very few revisions to these tables are necessary and are indicated by the revision bars in the right hand margin of the affected pages.





Additionally, in Unit 1 only (Attachment 2), we have included under the Safety Injection function in Specification 3/4.3.2 the auto start requirement for the Motor Driven Auxiliary Feedwater Pumps (MDAFP) by revising the heading of "Functional Unit" Section 1. on tables 3.3-3 (page 3/4 3-16), 3.3-4 (page 3/4 3-24) and 4.3-2 (page 3/4 3-31) to include the MDAFP's. This requirement is already incorporated in the corresponding existing Unit 2 Technical Specifications and they need not be revised to meet the Lessons Learned requirements.

Specification 3/4.3.3.8 (NEW) - Unit 1  
Specification 3/4.3.3.6 - Unit 2

The existing Technical Specification for Post-Accident Instrumentation in Unit 2 has been revised to include the applicable monitoring instrumentation for the Category "A" Lessons Learned items on Tables 3.3-10 and 4.3-10 and deletion of the Steam Generator wide range level indication from the same tables as a post-accident monitoring instrument. The Unit 1 Technical Specifications currently do not contain a specification for post-accident instrumentation. As such, the revised Unit 2 Specification 3/4.3.3.6 is being proposed in its entirety in Unit 1 as a new Specification 3/4.3.3.8. We are adding this at the end of the Instrumentation section of the Unit 1 Technical Specifications as a new item to avoid extensive page renumbering.

The approved Cook Plant post-accident monitoring instrumentation for the Category "A" Lessons Learned items include (Reference 1):

- a) Auxiliary feedwater flow rate channels. These channels can be substituted for by using the corresponding steam generator water level channel in the event that the AFW flow rate channels become inoperable. Both systems satisfy the Lessons Learned requirements (Reference 1). In this case the LCO is met and no further action is required.
- b) RCS subcooling margin monitor. This can be substituted for by using the Plant computer (PRODAC-250) readout of subcooling margin in the event that the subcooling monitor becomes inoperable. Both systems satisfy the Lessons Learned requirements (Reference 1). In this case the LCO is met and no further action is required.
- c) PORV position indication. The stem-mounted limit switches provide direct valve position indication in compliance with the Lesson Learned requirements. The acoustic monitoring system indication which is also installed, can be substituted for the limit switch indication. Both systems satisfy the Lessons Learned requirements (Reference 1). In this case the LCO is met and no further action is required.

- d) PORV block valve position indication. The stem-mounted limit switches provide direct valve position indication in compliance with the Lessons Learned requirements.
- e) Safety valve position indication. The acoustic monitoring system provides the direct valve position indication in compliance with the Lessons Learned requirements.

The "Steam Generator Water Level - Wide Range" channel has been deleted from the Unit 2 tables, and has not been included in the corresponding proposed Unit 1 tables for the following reasons. The Steam Generator Wide Range Water Level (SGWRWL) instrumentation does not perform any safety-related function and is not assumed operable in the various plant safety analyses. As such, the SGWRWL Instrumentation is not included within the scope of IE Bulletin No. 79-01B. The SG Narrow Range Water Level Instrumentation (3 channels/loop) is seismically and environmentally qualified and is correctly included in table Nos. 3.3-10 and 4.3-10. The narrow range instrumentation fulfills all post-accident monitoring requirements for SG level indication and is referenced in the emergency operating procedures.

#### Specification 3/4.4.4 - Units 1 and 2

The existing Technical Specification for the Pressurizer has been revised to include, within the Limiting Condition for Operation (LCO), the requirement for operability of at least 150 kW of heaters. This is the necessary capacity to have available within one (1) hour for maintaining adequate subcooling while in the natural circulation cooling mode. The existing LCO covers adequately the requirement for Pressurizer level instrumentation since this equipment is used to verify that the Pressurizer is non-water solid by maintaining a certain water volume. The value used is consistent with that used in our proposed over-pressurization protection Technical Specification. The corresponding ACTION of the LCO and the Surveillance Requirements have been revised to include the new additional requirements contained in the model Technical Specifications of Mr. Eisenhut's July 2, 1980 letter.

#### Specification 3/4.4.11 - (NEW) - Units 1 and 2

The proposed Technical Specification for the Reactor Coolant System Power Operated Relief Valves (PORVs) and Block Valves (BVs) is a new specification for the Cook Plant. We have appropriately included this specification within the section of the Technical Specifications covering the Reactor Coolant System (3/4.4) and to avoid extensive re-numbering of existing Technical Specifications we are adding it at the end of section 3/4.4 as a new Specification 3/4.4.11.

The Cook Plant design contains three (3) PORVs and each has a corresponding BV. The PORVs are spring-closed, air-to-open upon actuation of their corresponding solenoid control valve. The solenoid valve and the BV are electrically operated (the BV being a motor operated valve) and powered from the emergency buses.

The generic Westinghouse analyses performed for a four loop plant include only two PORV's and associated BV's. The proposed Action statement allows for operational mode changes in the Cook Plant with one (1) of the PORV's or BV's inoperable, provided of course that the relief path is isolated. Also, the reporting requirements are not applicable in the case of one (1) PORV or BV inoperable. This additional flexibility is warranted since the Cook Plant design differs from the generic 4 loop Westinghouse Plant and since the requirement to isolate the inoperable relief path (otherwise shutdown the plant) is not waived. All of the approved generic analyses remain valid for the Cook Plant even with one PORV or BV (relief path) inoperable and isolated.

There are two ways to isolate a relief path depending on whether the PORV or the BV is inoperable. In the case of an inoperable PORV which cannot be restored to operable status the associated BV must be closed and power removed. In the case of an inoperable BV which cannot be restored to operable status and the BV cannot be closed or power removed, the associated PORV can be closed and power removed from its associated Solenoid Valve. These action requirements hold for all three (3) of Cook's PORV's/BV's otherwise plant shutdown is required. These provisions are consistent with the model Technical Specifications contained in Mr. Eisenhower's letter. The provision to close the PORV and remove power from its associated Solenoid Valve with an inoperable BV assures that the relief path once isolated in this manner will remain isolated. Of course when testing the BV and Action Statements 3.4.11.a or 3.4.11.c are applied, the provisions of 4.0.4 are no longer applicable since the preference is to keep the relief path with inoperable equipment in an isolated condition. The exemption is included in the corresponding surveillance requirements.

As mentioned above the power supplies for the BV's and the PORV's are from the emergency buses. This is a permanent feature in the Cook Plant design. As such, the surveillance requirement for testing of the emergency power supplies contained in Mr. Eisenhower's model Technical Specification does not apply to Cook Plant since these electrical power sources are permanently connected to the emergency safeguards buses. In order to meet the intent of the model Technical Specification surveillance requirement we have included the provision to test the PORV's/BV's when the emergency safeguards buses are energized by the diesel generators and plant batteries in conjunction with the corresponding 18 months surveillance requirements for this equipment. The PORV's and BV's are just an electrical load connected to the emergency safeguards buses and, thus, the required surveillance will be performed when these buses are energized from their emergency power sources.



In addition in Unit 1 we have revised Specification 4.0.3 on page 3/4 0-2 to be consistent with 4.0.3 of Unit 2 and not require surveillance on inoperable equipment. For example, this becomes necessary when a relief path is isolated because of inoperable equipment, whose operation to perform required surveillance could cause a loss of RCS pressure boundary. Performance of the BV cycling test suggested in the model Technical Specifications when the PORV in the same relief path is inoperable and the BV has to be closed and made inoperable (power removed) in accordance with the corresponding Action requirements would be undesirable since it would require re-opening that BV. As such, adding this provision to 4.0.3 in Unit 1 becomes necessary and agrees with 4.0.3 in Unit 2.-----

Table 3.6-1: Containment Isolation Valves-Units 1 and 2

A second 'fail-closed' air operated containment isolation valve, QCR-301, is being installed in the letdown line to the letdown heat exchanger to address the NRC concern set forth in Item 2.1.4 of the Commission safety evaluation of IMECO. compliance with the Category 'A' Lesson Learned Requirements dated March 20, 1980. Technical Specification Table 3.6-1 of both Units 1 and 2 is being revised to incorporate this valve. The revision to this existing specification should become effective upon installation of the new containment isolation valve. An exact installation date has not been determined since this new equipment has a long procurement lead time (18 mos.). In any case, a refueling outage is required to perform this modification. The rest of the NRC-proposed Technical Specification is already a part of the Cook Plant Technical Specifications.

Table 6.2-1 - Units 1 and 2

The requirement to have a Shift Technical Advisor (STA) on duty in Modes 1, 2, 3 & 4 has been included in this table on Technical Specification page 6-4 for both Units 1 and 2. A STA is on duty for both Units 1 and 2 as a shared function (appropriately footnoted) in compliance with the Lessons Learned requirements.

Specification 6.3 - Units 1 and 2

The facility staff qualification requirements have been revised to incorporate those requirements applicable to the STA. Under the approved Cook Plant STA program, full compliance with these staff qualification requirements will be achieved by January 1, 1981. We propose this Technical Specification revision now (applicable to both Units 1 & 2) to take effect on 1/1/81 in compliance with the Lessons Learned requirements.

Reference 1: NRC Safety Evaluation Report for compliance with the category "A" Lessons Learned requirements dated March 20, 1980.