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SUBJECT: Responds to NRC 920220 ltr re concerns noted in Exam Rept 50-315/OL-92-01 during wks of 920120 & 27.orrective actions:. weaknesses will be evaluated & analysis will determine areas for generic improvement to be included in next training.

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Donald C. Cook Nuclear Plant Units 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. NPR-58 and NPR-74
NRC EXAMINATION REPORT NO. 50-315/0L-92-01;
RESPONSE TO EXAMINATION REPORT CONCERNS

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Attn: A. B. Davis

March 20, 1992

Dear Mr. Davis:

This letter is in response to Mr. G. C. Wright's letter dated February 20, 1992, which forwarded the results of the NRC administered requalification examinations conducted during the weeks of January 20 and 27, 1992.

Emergency Operating Procedure knowledge and implementation concerns were identified by the NRC during the administration of the dynamic simulator examination. As such, our response provides a review of these concerns and the actions to be taken to improve operator performance. Our response is provided as an attachment to this letter.

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

Sincerely,

E. E. Fitzpatrick
Vice President

aln

Attachment

A005
1/1

cc: D. H. Williams, Jr.
A. A. Blind - Bridgman
J. R. Padgett
G. Charnoff
NRC Resident Inspector - Bridgman
NFEM Section Chief

ATTACHMENT

NRC REQUALIFICATION EXAMINATION RESPONSE

OVERVIEW

During the weeks of January 20 and 27, 1992, the NRC administered requalification exams to licensed operators of the Cook Nuclear Plant. During these exams, several areas of concern in Emergency Operating Procedure (EOP) knowledge and implementation were identified by the NRC examiners. A written response to this concern was requested.

Paragraph 2.d of the examination "Report Details" identifies six specific examples of either knowledge or performance weaknesses in the implementation of Emergency Operating Procedures. In general, the weaknesses identified are similar to those observed through our own simulator continuing training evaluations. The actions we have initiated applicable to the NRC concerns and two exceptions to the specific observations are detailed below.

ACTION PLAN FOR IMPROVEMENT

Each NRC identified weakness will be evaluated in conjunction with other self-identified deficiencies from the annual requalification process. This analysis will determine areas for generic improvement and specific weaknesses in EOP knowledge to be included in the next annual requalification training cycle. The analysis of these weaknesses and the resulting annual requalification plan and schedule will be completed by April 3, 1992.

Actions are in progress from recent assessments to strengthen the control room crew performance in responding to simulated emergency conditions. A review of the crew assignments for simulator training has determined that the composition does not adequately reflect the actual control room team. This has resulted in less than optimum team training, and has detracted from the shift supervisor exercising proper oversight of emergency response actions. As a result, the training crew

composition has been augmented with additional licensed personnel to more closely simulate the actual control room team and improve training effectiveness.

Simulator training standards for determining acceptable overall program performance will be reviewed. Any necessary improvement will be accomplished by April 30, 1992.

A process for trending individual operator performance during requalification training has been established. Annual exam and continuing training results will be trended to identify opportunities for individual performance improvements. Periodic reports will be issued to summarize progress during the year to individual operators and management. As a result of this trending, supplementary simulator based training emphasizing EOP implementation will be provided.

EXCEPTIONS

One noted weakness identified a crew failure to depressurize the steam generator secondary side at maximum rate.

2.d(2) A crew failed to perform a depressurization of the secondary at a maximum rate during a loss of all AC power event.

The specific method required to perform this depressurization has been widely discussed to determine industry practices. As a result, this item was identified to the Westinghouse Owners Group (WOG) for resolution. On March 4, 1992, the WOG addressed the resolution to this concern formally via Work Item 91-06. The Owners Group response provides a consistent means of depressurizing the secondary during a Loss of All AC scenario by utilizing all four steam generators, when possible. This method will be reviewed and incorporated appropriately into emergency procedures by April 30, 1992.

Another apparent weakness described the crew's ability to discriminate between expected secondary depressurization during a loss of coolant accident (LOCA) and a possible faulted steam generator.

2.d(4) A crew was unable to discriminate between an expected depressurization of the secondary due to the effects of cold SI flow during a large break LOCA event with operation of the turbine driven

auxiliary feedwater pump, and a depressurization of all steam generators due to all steam generators being faulted. As a result incorrect transitions to E-2, Faulted Steam Generator Isolation, and ECA 2.1, Uncontrolled Depressurization of all Steam Generators, were made.

The actions of the crew did not follow the predicted EOP transitions based on the scenario. However, it is our position that these transitions were appropriate based on the plant response indicated to the control room team. Further, the actions were in accordance with the emergency procedures, and did not have safety consequences in delaying recovery actions.

The referenced simulator scenario imposes a LOCA equivalent to 750 gallons per minute break flow. At the time the crew transitioned to E-2, the turbine driven auxiliary feedpump (TDAFP) was running, auxiliary feedwater (AFW) to the steam generators had not yet been throttled, and main steam lead (MSL) drains had not been isolated. These conditions, in combination with the cold safety injection flow to the primary, caused a rapid cooldown and depressurization of the steam generators.

For purposes of comparison, a similar LOCA scenario with the effects of a faulted steam line was analyzed. The fault used was relatively minor, equaling only 2.5% of rated steam flow. This fault size is realistic, in that it roughly approximates the size of a fully open steam generator power operated relief valve. Also in this comparison, the TDAFP was secured, AFW throttled, and MSL drains closed to determine if the scenarios can be easily distinguished based solely on plant response. In both cases, the RCS break size was the same.

Our analysis revealed that the secondary depressurization due to the cooldown effects of the TDAFP, AFW, and MSL drains is more severe than the case with the faulted steam generator alone. This comparison obviously demonstrates the impact of not promptly removing unnecessary heat sinks from the secondary. However, it also clearly demonstrates that these effects cannot be distinguished from those of an actual steam line fault relying on plant response alone. In particular, the primary indicating response called for in the EOP's (steam generators depressurizing in an uncontrolled manner) will not alone discriminate between

these two events. This requires that the operator make a judgment based on the indicated response and known plant conditions, whether a transition is necessary to satisfy the intent of the procedure.

When judgment is exercised, the decision must be consistent with our standards for EOP implementation, a philosophy of conservative decision-making, and strict procedure adherence. In the evaluated scenario, the control room team did not limit secondary heat sinks and auxiliary feedwater appropriately. However, when the decision was made to transition to the faulted steam generator procedure, the action was consistent with our implementation philosophy, and had no adverse safety consequences.

SUMMARY

The NRC identified weaknesses in EOP knowledge and implementation are of concern, and will be addressed through future requalification training and program improvements. It is our standard that control room teams implement emergency operating procedures accurately and efficiently to ensure prompt termination of and recovery from emergency conditions. Recognizing that all possible scenarios and plant conditions cannot be identified or simulated, the operating crews must exercise conservative decision-making in response to unexpected plant responses. It is our practice to consistently support this philosophy within the framework of strict procedural compliance.