



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

ENCLOSURE 3

SUPPLEMENTAL SAFETY EVALUATION REPORT
BY THE OFFICE OF NUCLEAR REACTOR REGULATION

D.-C..COOK NUCLEAR UNITS 1-AND 2

DOCKET NOS. 50-315/316

1.0 INTRODUCTION

On August 29, 1989 the NRC issued a safety evaluation that documented the staff review of the second ten-year program for in-service testing of pumps and valves at D. C. Cook, Units 1 and 2. The program is based on the requirements of Section XI of the ASME code, 1983 Edition through the Summer of 1983 Addenda. The SE conditionally granted seven relief requests, partially denied two relief requests, and completely denied seven relief requests. Reliefs were denied in instances where proposed alternative testing was deemed unacceptable or where an adequate basis for the relief request had not been provided. The relief request denials and other anomalies identified during the IST program review are listed in Appendix C of the SE.

A meeting was held between the staff and AEP on November 8, 1989 to allow AEP an opportunity to readdress the relief requests that were denied. This supplemental safety evaluation documents the resolution of the issues discussed at the November 8, 1989 meeting. This supplemental safety evaluation also documents how the licensee addressed anomalies in Appendix C of the the November 8, 1989 SE.

2.0 EVALUATION

The licensee committed to implement changes to the IST program in accordance with the SE for the following issues:

Appendix C, No. 17. (3:2.1)

Flow instrumentation will be installed on the spent fuel pit cooling pumps (tentative completion date January 31, 1990).

Appendix C, No. 3 (4.2.1.1)

Closure of main steam to turbine driven auxiliary feedwater pump (TDAFP) check valves (MS-108-2 and -3) will be verified in accordance with Generic Letter 89-04.

Appendix C, No. 14. (4.4.1.1)

The essential service water to auxiliary feed pump suction valves will be tested on a cold shutdown frequency.

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AEP provided further technical justification and clarification in the following areas:

Appendix C, No. 5

A revision to the IST program notes will indicate that the TDAFP suction and discharge valves will be part stroke exercised quarterly and full stroke exercised at a cold shutdown frequency. The staff concurred with the licensee's resolution.

Appendix C, No. 2 (4.1.1)

The IST program will be revised to designate valves with maximum limiting stroke times of up to two seconds as "fast acting valves". The staff agreed that stroke times do not need to be specified in the program and concurred with the licensee's resolution.

Appendix C, No. 3

The program will be changed to indicate that disassembly of check valves will be performed in accordance with Generic Letter 89-04 (disassembly accepted instead of testing in some cases where testing proved impractical). The staff indicated some concern about the possibility of incorrect reassembly of bonnet hinged check valves. AEP indicated that bonnet hinged check valves can be back flow tested and would not have to be disassembled under the IST program.

AEP requested clarification on the requirement to test different sized valves of the same type and manufacturer at a given frequency. The staff suggested that AEP might want to consider separating the valve sizes into two groups and changing the frequency, as allowed by Generic Letter 89-04, if it can be justified based on in-service experience.

Appendix C, No. 12

AEP stated that the diesel generator air start valves XRV-221 and 222 have no required fail safe position and fail safe testing should not be required. (Valves fail in one position on loss of instrument air and in the other position on loss of DC power). The staff concurred with the licensee's conclusion.

Appendix C, No. 16

AEP clarified that no relief was required for testing of essential service water to diesel generator cooling check valves since all required tests for Section XI are already performed.

Appendix C, No. 4 (4.3.1.1)

AEP discussed the burden involved in disassembly of feedwater header check valves (FW-118-1,-2,-3, and -4) at every cold shutdown and proposed to disassemble the valves on a refueling outage frequency. The staff found the licensee's resolution acceptable.

Appendix C, No. 9 (4.7.1.1)

Additional justification was also provided for not fail safe testing and stroke



11/11/11

timing normal charging control valves QRV-200 and -251. AEP contends that stroke timing is impractical because there is no local or remote position indicator on the valves. The staff agreed that locally verifying smooth full travel of the valve would be adequate. AEP explained to the staff that QRV-200 does not have a fail safe position. Furthermore, AEP indicated that fail safe testing of the QRV-251 valve was impractical and would require disassembly of the air supply line. However, AEP committed to investigate possible ways in which to perform fail safe testing of QRV-251 (e.g., adding a valve to the air supply line if necessary).

Appendix C, No. 13 (4.8.1.1)

The staff agreed with the AEP justification for fail safe testing the letdown heat exchanger temperature control valve (CRV-470) only on a cold shutdown frequency (i.e., not at power).

Appendix C, No. 8 (4.6.1.3)

AEP's proposal for testing containment isolation check valve (SI-189) was consistent with Generic Letter 89-04 but still a code deviation. The staff determined that the licensee's proposal to part stroke test on a cold shutdown frequency and full stroke test on a refueling outage frequency is acceptable.

Appendix C, No. 11

With regard to RHR pump discharge line check valves (RHR-108E and -108W): AEP proposed to conduct a part stroke test on a quarterly basis and a full stroke test during cold shutdown. The staff agreed with this since full stroke of the valve at full power is undesirable and since the line isn't instrumented for full flow.

Appendix C, No. 7 (4.6.2)

AEP proposed to test the reactor head vent valves and the pressurizer vent valves during cold shutdowns when the RCS pressure is less than or equal to 80 psig for personnel safety considerations. The staff asked the licensee to explain the basis for the 80 psig pressure constraint. AEP (Donna Moeller) notified the NRC Project Manager on 11/15/89 that these valves would be tested during cold shutdown in accordance with Code requirements.

3.0 CONCLUSION

The staff has determined that the IST program for D. C. Cook, Units 1 and 2 as presented in the August 29, 1989 SE and modified and clarified in this supplemental SE will provide reasonable assurance of the operational readiness of the pumps and valves to perform their safety related functions. Therefore, the staff requests that AEP resubmit the modified IST program by February 16, 1990 so that program implementation can commence by April 1, 1990.

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