



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

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MARCH 15 1982

Docket No. 50-313

MEMORANDUM FOR: Thomas M. Novak, Assistant Director for Operating Reactors, Division of Licensing

THRU: John F. Stolz, Chief, Operating Reactors Branch #4 *JK*

FROM: Guy S. Vissing, Project Manager, Operating Reactors Branch #4

SUBJECT: EVALUATION OF ARKANSAS NUCLEAR ONE, UNIT NO. 1 (ANO-1)- JUSTIFICATION FOR INTERIM OPERATION PENDING RESOLUTION OF THE EQUIPMENT QUALIFICATION PROGRAM

ANO-1 was listed in the February 5, 1982, Franklin Research Center (FRC) Report as a plant which has not provided sufficient justification for interim operation pending resolution of the Environmental Qualification of Safety Related Electrical Equipment Program.

The FRC evaluation of the ANO-1 information provided in the Arkansas Power and Light Company letter dated October 1, 1981 simply stated: "In FRC's judgment, the Licensee's submittal did not adequately address the deficiencies identified in the SER and provided justification for interim operation in general and superficial terms rather than specifically assessing the qualification deficiencies on a case-by-case basis."

The October 1, 1981 letter has since been reviewed and I find that this letter identifies 137 components which are either inside or outside the containment and are not required to mitigate the consequences of a LOCA or HELB. These same components were identified in the staff's SER of June 16, 1981, as components which required additional information for qualification. The above justifies the interim operation for these components.

There was still a sizeable number of components remaining on the staff's list of components not fully qualified which required information to determine a justification for interim operation.

On February 10, 1982, we discussed the above with Arkansas Power and Light Company. At that time AP&L committed to provide a more comprehensive justification for interim operation by February 28, 1982.

By letter dated February 27, 1982 (Enclosure 1) AP&L provided more detailed justification for interim operation. This consisted of a justification for interim operation for each component identified in the October 1, 1981 report which was not fully qualified. There were 197 components which are in this category.

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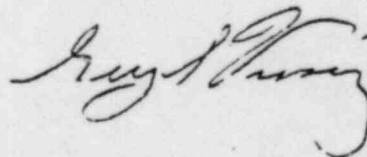
Following are typical examples of justifications which were identified to support interim operation:

1. The component would not be subjected to a harsh environment prior to performing its safety function and subsequent failure would not impact this completed function. Example: Make-up and purification let down control valve motor.
2. The component is located outside the containment and would be affected only by a HELB. Since the component needs to operate only after a LOCA the required safety function would not be jeopardized. Example: Hydrogen analyzer system for H₂ inside containment.
3. Since the source of radiation would be isolated at the initiation of a LOCA the significant radiation would be reduced and therefore the component would not be exposed to radiation in excess of allowable. Example: Hydrogen Purge Exhaust Heater Temperature Switch, TS 7442A.
4. The component was qualified for an integrated dose slightly less than the dose it was postulated to receive over a one year time period. However, the component is only required to be operational for a short time period following an accident. In this time period it would not accumulate a significant dose. No failure mode was identified to cause the component to actuate in an unsafe position following its initial safety function. Example: Reactor Coolant Letdown Line Isolation Valve, CY 1221.
5. The component was conservatively assumed to be located in an area of high radiation when in fact it is located in an area which would be shielded from the radiation source. Example: Makeup Pumps Recirculation Valve Motor Operator, CV-1300.
6. All required operation of the component is performed prior to a significant radiation exposure. Example: Operating Valve & Switch for Decay Heat Removal System, CV-1401.
7. If the component fails to perform its function a redundant component is available for the function. Example: Hydrogen Purge Exhaust Heater Temperature Switch, TS 7442A.
8. The component was determined not to be required for a safety related function. Example: Triaxial Instrumentation Cable, CEN 1001.
9. The time during which the environment is above the rated temperature of the component is a very short time. The internal temperature would remain at a substantial lower temperature based on engineering judgment. The operation of the component would not be required until "a considerable period of time" after the component would experience the specified temperature assuring that the component would be fully cooled before operation. Example: Valve CV3800-SWS to Decay Heat Removal System.

10. The component's normal position is the safe position. If the component would experience the harsh environment the component would not operate in the unsafe positions. Example: Decay Heat Removal Cooler Outlet Valve CV 1428.
11. Test results have demonstrated the component's function in the harsh environment. Example: Signal Cable CIN-1002.
12. The component casing would protect it from the specified harsh environment. Example: Pressurizer Level Transmitters, LT-1000.
13. The component will complete its function before experiencing the harsh environment. No failure mode has been identified to operate the component after serving its safety function. Example: Decay Heat Removal System Cooler E35B Isolation Motor Operated Valve and Switch CY 1400.
14. The component would experience the harsh environment for only a short period of time. Based on engineering judgment the component would not be expected to occur any damage. Example: Makeup and Motor Purification Pump, PM 31A.

In most cases more than one justification was provided to justify interim operations.

Based on my review of the AP&L justifications for interim operation of equipment important to safety, I have determined that sufficient justification has been provided to show that ANO-1 can continue to operate pending resolution of the EQ issue.



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cc w/o enclosure:
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