

OPPD

Omaha Public Power District
1623 Harney Omaha, Nebraska 68102
402/536-4000

August 30, 1985
LIC-85-364

Mr. Edward J. Butcher, Acting Chief
Operating Reactors Branch #3
Division of Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

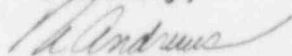
- References: (1) Docket No. 50-285
(2) Letter OPPD (R. L. Andrews) to NRC (J. R. Miller) dated
January 9, 1985 (LIC-84-338)
(3) Letter OPPD (R. L. Andrews) to NRC (J. R. Miller) dated
April 8, 1985 (LIC-85-142)

Dear Mr. Butcher:

Request for Additional Information
Concerning 10 CFR 50 Appendix R

Omaha Public Power District (OPPD) described in Reference (2) its alternate shutdown capability for Fire Area 34B. Additional information was requested and OPPD responded via Reference (3). Mr. E. G. Tourigny, of your office, requested additional information concerning our Reference (3) submittal. Please find attached OPPD's response to these additional questions, and change pages, as appropriate.

Sincerely,



R. L. Andrews
Division Manager
Nuclear Production

RLA/DJM/rh

Attachments

cc: LeBoeuf, Lamb, Leiby & MacRae
1333 New Hampshire Avenue, N.W.
Washington, DC 20036

Mr. E. G. Tourigny, NRC Project Manager
Mr. L. A. Yandell, NRC Senior Resident Inspector

8509090074 850830
PDR ADOCK 05000285
F PDR

*A006
11*

ATTACHMENT 1

NRC Questions on Appendix R and Responses

1. Verify that for a fire in Fire Area 34B, the first action that will be taken by an individual will be to close the PORV's to prevent a LOCA.

Response The response to Item 1.e of Reference (2) stated that the District, in response to NUREG-0737, Item 1.C.1, is upgrading its Emergency Operating Procedures. This upgrade will be completed prior to Cycle 10 startup. The requirement to immediately close the PORV's upon detection of a fire in Fire Area 34B will be incorporated into the appropriate Abnormal Operating Procedure (which is entered into before a reactor trip and whose followup actions are also carried out should a reactor trip occur.)

2. The response to Item 2 states from Technical Specification 5.2.2.e, in part, "...The minimum shift crew necessary for safe shutdown of the unit (2 members)." Later, in the same response, the minimum manpower requirements identify the need for a minimum of five members. Verify that the technical specifications will be modified to reflect the five people needed to safely shut down the plant.

Response OPPD has reviewed the manpower requirements and procedures necessary to achieve safe shutdown of the unit in the event of a fire in Fire Area 34B. Results of this review indicate that a number of the procedural requirements can be combined, thus reducing the minimum number of operators required to shut down the plant. Revised pages of Reference (2) are provided in Attachment 2.

As shown in Attachment 2, only two members of the shift crew are required, as a minimum, for safe shutdown of the plant. The Reactor Operator (RO) will remain in the Control Room. The Assistant Reactor Operator (ARO) will proceed immediately to the switchgear room to isolate power feeds to and from the affected fire area (including the requirements of Response 1, above). The ARO will then proceed directly to Room 81 to manually position valves HCV-1107B and HCV-1108B as directed by the RO. Once this has been accomplished, he will return to the Control Room to assist the RO. The ARO will remain available to return to Room 81 as necessary to reposition the auxiliary feedwater valves.

The Shift Technical Advisor (STA) is available for guidance and as an aid in communication, but is not required. It should be noted that this is the minimum crew necessary to safely shut down the plant. As shown in Attachment 2, two additional operators are available and procedures will be developed based on their presumed availability. The above outlined procedure is provided only to illustrate the fact that the plant can be shut down with only two shift crew members available.

3. Provided a commitment stating that no fuses will be pulled to bring the plant to a safe shutdown condition. Alternately, if circuit breakers will be installed, provide 1) a commitment to install the circuit breakers; 2) an installation schedule, and 3) justification for interim operation.

Response

- (1) As stated in Reference (3), new instrument inverters are being installed at Fort Calhoun. Circuit breakers will be installed as part of this modification to provide the required isolation.
- (2) Installation of these inverters is currently scheduled for the 1985 refueling outage with a completion/implementation date of 30 days following the end of the refueling outage.
- (3) Interim operation is justified by the fact that the required isolation can currently be performed without pulling any fuses. This is accomplished by the use of various breakers as described in the response to Request (3) in Reference (3). Plant operating staff has been informed of the concern and possible consequences of a fire in this fire area. Direction has been provided to ensure that operators are aware of the proper method of isolating power to and from the affected fire area without the pulling of fuses.

4. Clarify the members of the Fire Brigade as cited in Reference (3)

Response

Reference (3) contained a description and listing of the members of the Fort Calhoun Station Fire Brigade. The Shift Supervisor was identified as the Fire Brigade Leader. Based on an open item identified in an inspection report, steps have been taken to assign the responsibility of Fire Brigade Leader to the Licensed Equipment Operator-Nuclear. See Attachment 2 (pg. 10) for the changes necessary to incorporate this change.

Attachment 2

Revised Pages 9 and 10 to LIC-84-338

- f. Verify that the manpower required to perform the shutdown functions using the procedures of e. as well as to provide fire brigade members to fight the fire is available as required by the fire brigade technical specifications.

Response: Technical Specification 5.2.2 defines the minimum operating crew and fire brigade size. During normal plant operation, a minimum operating crew of seven persons is maintained on all shifts. This includes shift supervisor*, reactor operator*, assistant reactor operator*, turbine building operator*, auxiliary building operator*, water treatment plant operator*, and shift technical advisor (STA). Two of six security force personnel* and one phone talker* are available for fire brigade duty. This ensures that technical specification requirements for a minimum fire brigade size of five persons, and minimum operating crew of two persons necessary for safe shutdown, are available and that at least three additional persons are available to accomplish steps 1.e.2 and 1.e.3 above. In summary, manpower allocation is as follows:

NOTE: Personnel who have received Fire Brigade training are indicated by an *.

Fire Brigade (per Standing Order G-28)

Licensed Equipment Operator - Nuclear (Leader)
Water Plant Operator
Phone Talker
2 Security Personnel

Control Room (Tech. Spec. 5.2)

Reactor Operator
Assistant Reactor Operator
Shift Technical Advisor

Room 81 (Auxiliary Feedwater Throttling as needed)

Assistant Reactor Operator

Switchgear Room

Assistant Reactor Operator

Additional Personnel Available

Turbine Building Operator
Auxiliary Building Operator
4 Security Force Personnel

- e. **Verify that licensee procedures have been or will be developed which describe tasks to be performed to effect the shutdown method. Provide a summary of these procedures outlining operator actions.**

Response: In response to NUREG 0737, Item I.C.1, the District is upgrading its Emergency Operating Procedures. This upgrade process will be complete and implemented prior to Cycle 10 startup. The Functional Recovery Procedure will provide guidance on how to maintain the safety functions as outlined in the response to Question 1.a on page 4 and ensure a safe plant shutdown for this fire. The expected operator response, utilizing the Function Recovery Procedure, is as follows:

1. A reactor shutdown or trip will be initiated manually from the control room. The controlled shutdown method is normally preferable to a trip; however, the severity of the fire will determine which method is appropriate. An automatic reactor trip may occur.
2. An operator will proceed to the switchgear room to isolate power feeds to and from Fire Area 34B-West.
3. He will then proceed to valves HCV-1107B and HCV-1108B in room 81 and will take manual control of these valves per direction of the control room operator. He will then return to the control room, and will be available to return to room 81 to throttle valves HCV-1107B and HCV-1108B as required.
4. Using available indications (i.e., pressurizer pressure and level, steam generator pressure and level, auxiliary feedwater flow and neutron flux) control room operators will use auxiliary feedwater pump, FW-6 (or FW-10), and will direct manual throttling of control valves HCV-1107B and HCV-1108B to sufficiently remove decay heat from the primary system via the steam generators and thus control RCS pressure.
5. As decay heat drops with time, intermittent charging pump operation may be used to maintain system pressure and pressurizer level if necessary.
6. Once RCS pressure and temperature drop below 265 psia and 300°F, respectively, the shutdown cooling system will be utilized to achieve cold shutdown.

It should be noted that this alternative shutdown capability already exists. Fort Calhoun station operating personnel have been trained in the use of the auxiliary feedwater system to control RCS pressure as this is the method used in our alternate shutdown system for the control room.