



UNITED STATES  
ATOMIC ENERGY COMMISSION  
WASHINGTON, D.C. 20545

JAN 23 1973

Docket No. 50-313

AS

R. C. DeYoung, Assistant Director for Pressurized Water Reactors, L  
THRU: A. Schwencer, Chief, Pressurized Water Reactors Branch No. 4, L

MEETING WITH ARKANSAS POWER AND LIGHT COMPANY, BABCOCK & WILCOX AND  
BECHTEL, CONCERNING REVIEW OF THE OPERATING LICENSE APPLICATION FOR  
ARKANSAS NUCLEAR ONE - UNIT 1

Enclosed is a report of the meeting held on November 2, 1972 with  
Arkansas Power and Light Company. The agenda and attendance list are  
also enclosed.

R. M. Bernero, Project Leader  
Pressurized Water Reactors Branch No. 4  
Directorate of Licensing

Enclosures:

1. Meeting Report
2. Agenda
3. Attendance List

cc w/encls:

A. Giambusso  
R. S. Boyd  
RP Asst. Directors  
TR Asst. Directors  
PWR Branch Chiefs  
RO (3)  
V. H. Wilson (2)  
R. W. Klecker  
M. Rosen  
R. Bernero  
B. J. Youngblood  
Attendees from REG  
F. Miraglia  
AEC PDR  
Local PDR

THIS DOCUMENT CONTAINS  
POOR QUALITY PAGES

8004280 737

F

Enclosure No. 1

Arkansas Power & Light Company

Arkansas Nuclear One - Unit 1

Docket No. 50-313

Report of Meeting - November 2, 1972

Summary

The meeting followed the attached agenda and included detailed discussion of the Emergency and Industrial Security Plans, review of the Reactor Protective System drawings, and the discussion of electrical and control topics. Other technical matters of current interest to this application were also discussed. As a result of this meeting, the applicant received direction for revision and publication of the Emergency and Industrial Security Plans. The Reactor Protective System drawing review was completed; no major design problems were identified.

Industrial Security Plan

The Industrial Security Plan was reviewed and discussed in detail. The Applicant was requested to confine the scope of this plan to industrial security, i.e., protection against industrial sabotage. Lighting and security measures were discussed. The Applicant agreed to revise the Industrial Security Plan as indicated and to resubmit it.

Emergency Plan

The Emergency Plan had been submitted for review in draft form since there was some question in the Applicant's mind about the scope and detail of this document.

The Applicant was informed that the scope and content of the draft Emergency Plan were appropriate for publication as part of the FSAR. The Applicant was also informed that publication of the Emergency Plan in a separate binder is preferred since this facilitates its use.

The detailed Staff comments on the Emergency Plan were reviewed. The categorization of area emergencies was discussed. The Applicant had proposed to make unilateral recommendations (before arrival of State personnel) for evacuation of public areas if individuals beyond the site boundary were expected to receive a whole body dose greater than 5 rem (or 15 rem to a child's thyroid, skin of the whole body, or any organ). The Staff commented that these values are too high; and that values of 2 rem and 10 rem respectively would be considered acceptable.

### Use of Emergency Diesels for Peaking

The Applicant reviewed his long-standing proposal to use the emergency diesel generators to supply power to the grid during peak load periods. The highlights of the Applicant's presentation were:

- a. The diesels and the emergency buses are protected from the grid by high current, ground fault and anti-motoring devices.
- b. The Technical Specifications already call for synchronizing the diesels to the grid and loading them once per month.
- c. Although the diesel generators are a relatively inefficient way to generate additional power, they are a meaningful addition to the Applicant's reserve capacity and afford some economic benefit even if not actually used for peaking.

The details of diesel generator operation and testing were discussed at some length but to no conclusion. The Applicant noted that the ability to use even one of the two diesel generators for peaking would be of significant economic benefit. The matter was left for staff consideration with the staff position to be stated to the Applicant by letter in the near future.

### Use of a Swing Switch on 480 V Motor

#### Control Centers

The Applicant had been questioned on the use of a manual throwover (swing) switch to furnish alternate 480V power supply from bus B5 or B6 to MCC B55/56. The question asked how such a switch could meet single failure criteria. The Applicant explained that no safeguards loads are on MCC B55/56, only loads important to plant operation which require continuous power supply such as the third service water pump and vital lube oil pumps. In the course of this discussion, the Applicant explained that Arkansas 1 uses a two color system (red and green) for safeguards system wiring. Where a third component is involved (e.g., the 3rd HPI pump) green is used again. The entire topic was left for resolution in the safeguards actuation drawing review scheduled later in the month.

#### Steam Line Break

Two basic questions were presented to the Applicant related to steam line break accidents; they were:

- a. A major seismic event could cause failure of both steam lines downstream of the main block valves. Since these valves are closed only by manual actuation and the transient return to criticality occurs in less than one minute, the plant should be analyzed for blowdown of both steam generators, not just one as at present.
- b. When one steam generator is disabled by a steam line break, it appears that a number of single failures can frustrate the supply of emergency feedwater to the intact steam generator.

Some were identified:

1. The motor-operated feed inlet valve fails to open.
2. The failure of one emergency feed pump can cause the other to fail by mechanical or flooding damage. The Final Safety Analysis Report (FSAR) shows the two side-by-side in the same room.
3. The feedwater control system (the Integrated Control System (ICS)) might fail.

These questions were discussed and the Applicant requested that both be transmitted by letter.

#### Flooding of Safety Related Equipment

In the October 20, 1972 response to a generic question on the effect of Class II system failures, AP&L had said that accidental flooding of safety areas such as the diesel generator rooms is precluded because the fire protection system sprinklers are manually actuated. The letter did not state whether the isolation valves are located inside or outside of the room affected; this question was raised with AP&L telephone after receipt of the letter. At this meeting AP&L stated that all such sprinkler system isolation valves are outside the spaces affected.

#### Steam Line Breaks in Auxiliary Buildings

The current concern for steam line breaks in auxiliary buildings was discussed with the Applicant. The Applicant noted that the steam lines in the Auxiliary Building are seismic Category I but have no special anti-whip restraints or barriers.

#### Reactor Protective System Drawing Review

The Reactor Protective System (RPS) was reviewed by detailed discussion of one of the four redundant protection channels using the B&W as-built logic drawings and the FSAR figures and text. Numerous drawing errors

were pointed out to the Applicant and he agreed to correct them. Review of these drawings showed the need for others which the Applicant agreed to provide; these drawings included:

1. Logic for protection channel bypasses.
2. Control rod drive power breaker drawings.
3. Power range channel test module logic.
4. Reactor coolant pump contact monitor and test module logics.
5. Reactor coolant flow channel test module logic.
6. Reactor coolant outlet temperature and pressure test module logics.
7. RPS power supply (+15V) internal logic.
8. NonNuclear Instrumentation (NNI) plug and jack arrangement panel details.

The drawings on hand were gone over in detail and the items noted included:

Drawing 8042122B

It was noted that the rod withdrawal inhibit logic as implemented did not meet the single failure criterion. The Applicant indicated that this logic has no safety significance.

Drawing 8042074B

The reactor coolant flow transmitter power supply fuses were noted as being incorrectly connected; the Applicant agreed to modify.

Drawing 8012221E

It was noted that there was inconsistency between the instrumentation identification here and in the FSAR functional P&ID's (piping and instrumentation drawings). The Applicant agreed to make the RPS logic conform to the identification used in the P&ID's.

Drawing 8042095B

It was noted that the power and intermediate range detectors power available alarm was combined in a single annunciator. The Applicant justified this combination by explaining that the power range trips on

Enclosure No. 2

AGENDA

Arkansas Nuclear One - Unit 1  
November 2, 1972

- I Industrial Security Plan 8:30-9:30 A.M.
- II Emergency Plan 9:30-10:30 A.M.
- III Break 10:30 A.M. - 10:45 A.M.
- IV Electrical & Control Topics 10:45 A.M. - 11:45 A.M.
- V L U N C H 11:45 A.M. - 12:45 P.M.
- VI Reactor Protective System  
Drawing Review 12:45 P.M. - 5:00 P.M.

Enclosure No. 3

ATTENDANCE LIST  
Arkansas Nuclear One - Unit 1  
November 2, 1972

Arkansas Power & Light Co.

W. C. Maugh  
D. Rueter  
J. Marlin  
J. Grisham

Babcock & Wilcox

\*T. Johnson  
\*H. Baker  
\*A. B. Lloyd  
\*C. C. Strepke  
\*R. J. Brockman

Bailey Meter Co.

\*T. Beans  
\*E. Miskovic

Bechtel

T. S. Burr  
G. Katanics  
J. Haidinger  
J. Oszewski

USAEC - DL

R. M. Bernero  
\*C. W. Moon  
\*F. Allenspach  
\*A. Schwencer  
\*T. Ippolito  
\*J. Calvo  
\*L. Riani  
\*F. Ashe  
\*D. Basdekas

USAEC - RO

R. F. Warnick  
M. S. Kidd  
\*V. Thomas

\*Denotes Part Time