

APR 17 1967

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Original signed by
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MINUTES OF MEETING ON OYSTER CREEK EMERGENCY CORE COOLING - DOCKET NO. 50-219

A meeting was held on April 4 and 5, 1967, with representatives of General Electric (GE) and Jersey Central (JC). Those in attendance included:

AEC-DRL

R. S. Boyd
R. L. Tedesco
A. J. Rizzo
V. Stello
M. A. Taylor
D. B. Vassallo
J. Buzy
L. Kintner

General Electric

R. A. Huggins
E. M. Krato
T. E. Bloom
M. Head
R. V. Poe
W. D. Gilbert
P. Fanni
J. B. Violette
W. Schulthess

Jersey Central

J. V. Neely
D. E. Metrick
I. R. Finfrock

ACRS

S. H. Bush

AEC-CO

J. B. Sears

The purpose of the meeting was to discuss the "as proposed" emergency core cooling system (ECCS) for JC's Oyster Creek plant. Although there are significant differences between the Oyster Creek plant and those now under consideration for construction permits, both JC and GE believe that the ECCS proposed is adequate.

The ECCS consists of (1) an A-C dependent feedwater system, (2) a semiautomatic depressurization system, and (3) a core spray system. Relative to present plants it lacks high pressure injection and flooding systems; and because the plant does not have jet pumps, reflooding is not possible for large breaks in a liquid line below the core. GE asked that Oyster Creek be judged on its own merits; however, it recognizes that the plant will be compared to those recently proposed by both the staff and the ACRS. To summarize, Oyster Creek is the first of the "large" BWR's to be considered for an operating license and, in our opinion, requires rather extensive "backfitting."

In our discussions on the ECCS, many problem areas developed which will require further investigation. The most significant of these are

listed below:

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- (1) The effectiveness of the feedwater system as calculated by a single node model appears optimistic. A multi-node model is under development but will not be ready in time for Oyster Creek.
- (2) Two different models are used to calculate the energy removed from the core during blowdown. Differences between these models have not been evaluated.
- (3) Certain reactor internals are in the plastic region following the design basis accident. The piping supports are not designed to withstand the jet forces associated with blowdown.
- (4) It is not clear that certain areas of spray effectiveness are handled in a conservative manner (emissivity, form factors and metal-water reactions).
- (5) The power distribution used for LOC accidents has not been identified as conservative. The power distribution must reflect conditions (stuck rod for example) to be called out in the technical specifications.
- (6) No allowance is made for the operator to interrupt the depressurization cycle, yet he has the option to do this.
- (7) It is not clear that an adequate "system" can be developed to identify a leak in the equipment required to function following a LOC accident. This is a severe problem since a leak can flood all of the core and containment spray pumps.
- (8) The potential for a reactivity transient coincident with a LOC accident has not been thoroughly investigated. Transients experienced on operating reactors indicate that no problem exists; however, these transients are not representative of LOC accidents.
- (9) Adequacy of the emergency power system is being approached by GE from an "availability" viewpoint. We are, in essence, being asked to believe that some absolute number (3 or 4 nines) for availability is adequate. In addition, the station design basis does not include tornado effects.
- (10) GE proposes to define the primary containment boundary to include all core and containment spray equipment. It does not plan on performing appropriate integrity tests.

E. S. Boyd

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At the conclusion of the meeting we summarized the areas where more information would be required. We agreed to prepare a formal list of questions within the next three weeks and would set up a meeting to review the draft questions.

Another meeting, covering other aspects of the Oyster Creek plant, is scheduled for May 4-5, 1967.

Distribution:

- Supplv
- DRL Reading
- RPB 2 Reading
- Orig: VStello
- S. Levine
- M. Rosen
- R. DeYoung
- A. Rizzo
- M. Taylor
- J. Sears, CG
- J. Buzy

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