



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

JUL 5 1968

R. S. Boyd, Assistant Director for
Reactor Projects, DRL

THRU: Saul Levine, Assistant Director for
Reactor Technology, DRL

TURKEY POINT UNITS NO. 3 AND 4 -- CADWELD SPLICES

Upon review of information obtained from the applicant, we have concluded that the Cadweld splices now in place in Units No. 3 and 4 are adequate from a structural viewpoint.

The strength criteria for the splices required that (1) the average strength of all splices be at least equal to the minimum ultimate strength of the rebar and (2) the minimum strength of a splice be not less than 125% of the rebar yield strength. These criteria are acceptable and, in fact, are more conservative than those we have accepted for more recently reviewed plants.

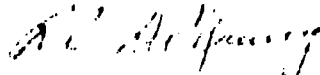
A so called "stagger splice" technique of quality control testing has been used to determine that the Cadweld splices do, in fact, meet the strength criteria. This technique was accepted at the construction phase of the DRL review. At the present time we are not as convinced of its adequacy and intend to review it in more depth on applications that are presently being evaluated. However, for the Turkey Point Units, we believe that the test program should be considered adequate because (1) the strength requirements are less for a prestress design than for a reinforced concrete design, (2) a satisfactory system of splice stagger was used, and (3) the design is such that the calculated stresses in the splices are low. We believe that any reduction in design margins that may have resulted from use of a "stagger splice" testing technique will be compensated for, in the case of the Turkey Point Units, by the slightly more conservative strength criteria and the relatively moderate service stresses that should be encountered by the splices in this particular design.

The questions raised in this matter by the Division of Compliance in their letter to you, dated June 21, 1968, have generally been addressed by the applicant during the course of our discussions. The applicant's responses have been adequate for our immediate needs concerning the review of the Turkey Point Units. However, more complete responses to the questions relating to testing and inspection criteria should, where applicable, be required for future reviews.

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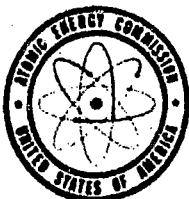
We understand that "authorization" to proceed with the construction of the Turkey Point Units was given to Florida Power and Light Company on June 28, 1968. This memorandum was requested as support for that decision and documents positions given verbally to Reactor Projects #3 during prior discussions.



R. C. DeYoung, Chief
Containment & Component Technology Branch
Division of Reactor Licensing

RT-776
DRL:C&CTB:RCDeY

cc: P. A. Morris, DRL
F. Schroeder, DRL
R. H. Engelken, CO
M. L. Ernst, CO
J. B. Henderson, CO
C. G. Long, DRL
P. S. Check, DRL
A. L. Gluckmann, DRL
E. G. Arndt, DRL
N. H. Davison, DRL



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7/10/68 H. Paulsen

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A so-called "sister splice" technique of quality control testing has been used to determine that the Cadweld splices do, in fact, meet the strength criteria. This technique was accepted at the construction phase of the DRL review. At the present time we are not as convinced of its adequacy and intend to review it in more depth on applications that are presently being evaluated. However, for the Turkey Point Units, we believe that the test program should be considered adequate because (1) the strength requirements are less for a prestress design than for a reinforced concrete design, (2) a satisfactory system of splice stagger was used, and (3) the design is such that the calculated stresses in the splices are low. We believe that any reduction in design margins that may have resulted from use of a "sister splice" testing technique will be compensated for, in the case of the Turkey Point Units, by the slightly more conservative strength criteria and the relatively moderate service stresses that should be encountered by the splices in this particular design.

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JYK 7/11/68
JX
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RHE rep. equiv

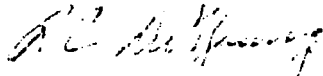
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R. S. Boyd

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