



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

November 2, 1984

MEMORANDUM FOR: William H. Briggs, Jr.
Solicitor

FROM: Nunzio J. Palladino *NJP*

SUBJECT: NRC BRIEF IN DIABLO CANYON CASE

After reading a copy of the NRC brief in the Diablo Canyon case, I have the following comment regarding 10 CFR 55.25, the administration of an operating test prior to initial criticality:

Section 55.25 authorizes the Commission to administer "a simulated operating test to an applicant for license to operate a reactor prior to its initial criticality," and it sets forth the conditions that must be met before the simulated test may be conducted. Among these conditions is the requirement that the Commission find that:

- (b) The applicant has had extensive actual operating experience at a comparable reactor.

It is my understanding, based on Staff comments, that when this rule was written (circa 1963), the use of the term "simulated operating test" referred to a walk-through type of test which did not involve actual manipulation of controls, and thus (in addition to other conditions) the requirement for prior extensive operating experience was an essential prerequisite. The term "simulated operating test" as used at that time did not specifically refer to the use of reactor plant simulators which were then very crude devices.

In support of this thesis is the fact that Subsection (d) of this Section, in speaking of simulated operating tests, made specific reference to the reactor control mechanism and instrumentation in the context of a Commission finding that:

- (d) The reactor control mechanism and instrumentation are in such condition as determined by the Commission to permit effective administration of a simulated operating test.

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Since the promulgation of this rule, sophisticated simulators have been developed which accurately model reactors to such an extent that effective training and testing of operators in a wide variety of normal, off-normal, and accident conditions can be accomplished. This capability goes far beyond what could be previously done in the earlier "simulated operating test." It does not appear that in requiring extensive operating experience, the rule (55.25) contemplated making this requirement a prerequisite to a test using current sophisticated simulators.

The practice of using simulator training and testing has evolved over a long period of time and its use has not been limited to a particular reactor.