



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

EVALUATION OF A REQUEST FOR EXTENSION OF  
PROVISIONAL CONSTRUCTION PERMIT NO. CPPR-95  
SHOREHAM NUCLEAR POWER STATION - DOCKET NO. EC-322

Introduction

A provisional construction permit was issued to Long Island Lighting Company (applicant) on April 14, 1973 for construction of the Shoreham Nuclear Power Station (facility) on the north shore of Long Island in the town of Brookhaven, Suffolk County, New York. The construction permit specified May 1, 1979 as the latest date for completion of construction of the facility. In a letter dated December 18, 1978 (SNRC-348), the applicant requested an extension of the latest completion date pursuant to 10 CFR Part 50.55(b). The applicant requested that construction permit No. CPPR-95 be amended to extend the latest date for completion from May 1, 1979 to July 1, 1980.

Discussion

The applicant's letter (SNRC-348) stated that the delay in completion of construction of the Shoreham Station was due to the following factors which were beyond the control of Long Island Lighting Company:

1. STRIKES

The site underwent a 10-week steamfitters strike in 1975 at the beginning of the piping installation effort. This strike, occurring as it did at the very start of the piping installation, effectively delayed that effort. Also it resulted in additional, though unquantifiable, delays due to the necessary remobilization of the large steamfitter work force after the strike. While this steamfitter strike has been the only major prolonged strike during the construction of the Shoreham plant, the applicant also experienced numerous short-term work actions by boilermakers, iron workers, and dock builders, as well as steamfitters, which cumulatively have resulted in significant additional delays.

2. INSUFFICIENT CRAFT MANPOWER

Since October 1977 there has been a shortage of qualified steamfitters. Since the piping and pipe support installation effort is on the critical path to fuel load, the absence of these craftsman has had a direct impact on the schedule. The applicant estimates that this situation alone has resulted in a 25-week delay. Further, while not directly related to a deficiency in manpower, progress on the critical path to fuel

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load was delayed due to the inability to institute a second shift on the jobsite. The construction schedule had called for a second shift to begin in 1975. However, due to prolonged contractual negotiations on this matter with the labor unions involved, the second shift was, in fact, not initiated until August of 1977. An additional factor that has contributed to the schedule delay has been lower than projected craft utilization rates.

3. SEVERE WEATHER CONDITIONS

Severe weather during the winters of 1976 and 1977 caused significant delays in the construction schedule because the reactor building had not yet been fully enclosed. Construction work on the upper elevation of the reactor building ceased for several weeks during those years due to unsafe working conditions caused by ice, snow, and high winds. Heavy ice and snow storms during the winter of 1978 resulted in several weeks of far below normal craft management attendance resulting in further delays in that year.

4. REGULATORY CHANGES

Primarily because of the four-year time span between the filing of the original Shoreham Application and the granting of the Construction Permit in April of 1973, Shoreham has been exposed to a far greater number of regulatory changes than would a plant which had not experienced such a delay in licensing. During this period the NRC Staff revised a number of safety standards that resulted in significant design changes with the attendant delays in specifying, procuring, and installing new or modified equipment.

In addition, there have been regulatory changes that have occurred during the construction phase of the Shoreham plant that have also caused delays. Changes due to the Mark II Containment pool swell and Safety Relief Valve discharge phenomena have been extensive. For example, bracing for the 88 downcomers in the suppression pool has been modified and the Safety Relief Valve discharge devices, which had already been installed, are currently being removed and replaced with the "T" quencher devices.

5. LATE DELIVERY OF CRITICAL EQUIPMENT

The late delivery of certain critical components, and the "out-of-sequence" delivery of others, caused major delays and inefficiencies in the construction process. This situation was most vividly illustrated by the serious delays encountered in the procurement of nuclear-grade valves and large bore piping. The reasons for the late deliveries fall into the following general categories:

- a. Code changes due to both regulatory developments and industry requirements (ASME Section III for example).
- b. Delays in the placement of orders caused by the requirement for re-engineering and upgrading specifications to accommodate new codes and standards.
- c. Intense competition for piping and valves during the period 1974 through 1976 caused by a spurt in refinery construction and oil exploration as well as in utility orders.

Based on our review of the applicant's request, we find that the above factors were beyond the applicant's control and constitute good cause for the delay in completion of construction. However, we believe that the applicant's revised estimate for completion of construction of the Shoreham facility may be optimistic. During a review of construction progress at the Shoreham site by the NRC Caseload Forecast Panel in January 1979,\* the applicant projected a fuel load date of June 1980. The Caseload Forecast Panel arrived at a more conservative estimate for a nominal fuel load date at Shoreham of October 1980. In order to provide a suitable margin for completion of Shoreham, which takes into account a reasonable allowance for additional delays from the same or similar delaying factors cited above, the latest date for completion of the facility should be extended from May 1, 1979 to December 31, 1980.

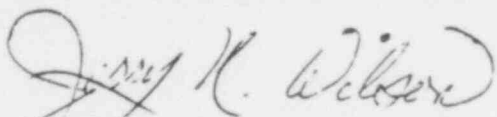
As a result of our review of the Shoreham Final Safety Analysis Report to date and considering the nature of the delays, we have identified no significant hazards considerations in connection with the extension of the construction completion date. In addition, we find that the only change

\*A summary of this meeting, dated January 22, 1979, was distributed to the public document room and all parties of the Shoreham proceeding.

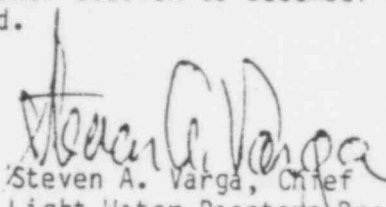
proposed by the applicant to the existing construction permit is an extension of the latest completion date. This extension will not allow any work to be performed involving new safety information of a type not considered by a previous Commission safety review of the facility and that is not already allowed by the existing construction permit. Therefore, we find that (1) this action does not involve a significant hazards consideration, (2) prior public notice of this action is not required, (3) there is reasonable assurance that the health and safety of the public will not be endangered by extension of the construction completion date, and (4) good cause exists for issuance of an Order extending the completion date.

Conclusions

Accordingly, issuance of an Order extending the latest completion date for construction of the Shoreham Nuclear Power Station to December 31, 1980 is reasonable and should be authorized.



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Dated: May 14, 1979