

THE TOLEDO EDISON COMPANY
AND
THE CLEVELAND ELECTRIC ILLUMINATING COMPANY
(Davis-Besse Nuclear Power Station, Unit 1)

DOCKET NO. 50-346

ORDER EXTENDING CONSTRUCTION COMPLETION DATE

The Toledo Edison Company and the Cleveland Electric Illuminating Company are holders of Construction Permit No. CPPR-80 issued by the Atomic Energy Commission* on March 24, 1971, for construction of the Davis-Besse Nuclear Power Station, Unit 1, presently under construction at the Companies' site on the southwestern shore of Lake Erie in Ottawa County, Ohio, approximately 21 miles east of Toledo, Ohio.

On February 11, 1975, the Company filed a request for an extension of the completion date because construction has been delayed due to (1) Construction Schedule, (2) Construction Permit Delay, (3) Work Delays, (4) Design Modifications and (5) Rework. This action involves no significant hazards consideration; good cause has been shown for the delay; and the requested extension is for a reasonable period, the bases for which are set forth in a staff evaluation, dated July 30, 1975.

IT IS HEREBY ORDERED THAT THE latest completion date for CPPR-80 is extended from April 1, 1975 to April 1, 1977.

FOR THE NUCLEAR REGULATORY COMMISSION

ORIGINAL SIGNED BY

V. A. MOORE
Voss A. Moore, Assistant Director
for Light Water Reactors Group 2
Division of Reactor Licensing

Date of Issuance: JUL 30 1975

*Effective January 19, 1975, the Atomic Energy Commission became the Nuclear Regulatory Commission and permits in effect on that day continued under the authority of the Nuclear Regulatory Commission.

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EVALUATION OF REQUEST FOR
EXTENSION OF CONSTRUCTION PERMIT NO. CPPR-80
FOR
DAVIS-BESSE NUCLEAR POWER STATION, UNIT 1
DOCKET NO. 50-346

A. Introduction

Toledo Edison Company (the Licensee) is the holder of Construction Permit No. CPPR-80 issued by the then Atomic Energy Commission on March 24, 1971 for construction of the Davis-Besse Nuclear Power Station, Unit 1 presently under construction at the Licensee's site located on the southwestern shore of Lake Erie in Ottawa County, Ohio approximately 21 miles east of Toledo, Ohio. In accordance with Section 185 of the Atomic Energy Act of 1954, as amended, 42 U. S. C. Section 2235, and in accordance with the Commission's regulations, 10 CFR Section 50.55, the Construction Permit states the earliest and latest dates for the completion of construction. By letter dated February 11, 1975, the Licensee advised the NRC staff that construction cannot be completed by the latest date presently specified, namely April 1, 1975.

The Licensee has therefore requested that the Construction Permit be extended to April 1, 1977. In accordance with 10 CFR Section 50.55(b), the staff, having found good cause shown, is extending the latest completion date to April 1, 1977 for the reasons stated below.

This Evaluation will set forth the following: in Section B, the "good cause" shown by the Licensee for an extension, that is, the specific delays which the Licensee has cited in support of its request for this extension; in Section C, the staff's independent judgement as to the "reasonable time" necessary from the present forward, to compensate for each delay factor; in Section D, a finding as to significant hazards consideration; and in Section E, a conclusion and a recommendation for an Order.

B. Good Cause

1. Construction Schedule

The Licensee's original construction schedule estimated fuel loading in June 1974, whereas the schedule presently estimates fuel loading no sooner than April 1976, a twenty-two month delay. The Licensee states that experience in constructing this facility indicates that original schedule estimates were overly optimistic. The current construction

schedule for this facility with projected delays is 72 months from Construction Permit exemption to anticipated commercial operation. Current construction time for similar facilities is not greatly different from the present schedule for this facility. The Licensee has indicated a delay of an unspecified degree is due to this underestimation of construction schedule.

2. Construction Permit Delay

The receipt of a Construction Permit for this facility was five months later than the original schedule called for. This delayed work on the containment vessel which was not included in the Construction Permit exemption.

3. Work Delays

The Licensee has indicated that lack of basic material for valve forgings, pump casing castings and steel plate have led to equipment deliveries being 12 to 18 months late. These late deliveries have caused varying delays in construction activities.

4. Design Modifications

The Licensee has indicated two areas where significant design modifications have contributed to an unspecified degree to the requested schedule extension: (1) inclusion of additional high-energy pipe restraints and associated building pressure relief panels to enhance safety equipment during faulted conditions and (2) reevaluation of seismic response spectra and design requirements as a result of a change in the seismic design criteria.

5. Rework

The Licensee has indicated low labor productivity, shortages of skilled labor and stringent quality assurance control requirements have contributed to extending completion of construction activities. The Licensee has also stated that complexity of designing, procuring and constructing a large nuclear facility has exceeded previous expectations, with a resulting lag in release of design and construction details in specific areas.

C. Reasonable Time

1. Construction Schedule

The Staff agrees that the Applicant significantly underestimated the construction schedule for this nuclear facility. This is not unusual for nuclear plants of this vintage where schedules had been based on experience gained in constructing fossil fuel power plants. We find, therefore, that the above factor contributed to unanticipated delays in construction activities. We conclude that an eight to ten month extension in completion of construction can reasonably be attributed to this factor.

2. Construction Permit Delay

We concur with the Licensee that issuance of the Construction Permit was five months later than had been anticipated in the original schedule. However, this delay was partially offset by the granting of a Construction Permit exemption. Since the exemption did not allow work on safety related structures such as the containment vessel, we conclude the Licensee's overall construction schedule may have been extended by two to four months due to this factor.

3. Work Delays

We are fully aware that lack of basic material for pump castings and steel plate have caused late deliveries for critical materials and equipment. In addition, manufacturers producing valves meeting nuclear code requirements have been unable to meet scheduled delivery dates. We conclude that between three to five months of the overall delay can be reasonably attributed to this factor.

4. Design Modifications

The Staff finds that significant modifications to structures, piping, systems and components have been required for this facility. We acknowledge that these modifications have contributed to the extension of the construction schedule. In our judgement, the modification having the greatest impact on schedule was the high-energy line break protection. We find it reasonable to attribute a schedule extension of four months for the implementation of these design modifications.

5. Rework

The Staff is aware that the unavailability of skilled craftsmen has contributed to decreased productivity resulting in schedule delays. In particular, this facility has had and continues to have shortages of qualified pipe fitters and welders. In addition, in order to

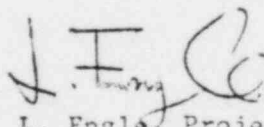
comply with the requirements of its quality assurance programs, the Licensee is known to have expended a significant amount of unanticipated additional work. We conclude that between three to five months of the overall delay can be reasonably attributed to this factor.

D. Significant Hazards Consideration

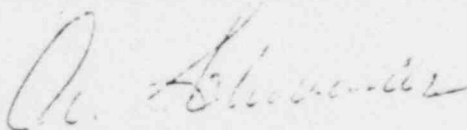
The Staff finds that because the request is merely for more time to complete work already reviewed and approved for Construction Permit CPPR-80, no significant hazards consideration is involved in granting the request and thus prior public notice of this action is not required.

E. Conclusion and Recommendations

For the reasons stated herein, the Staff concludes that the latest completion date for CPPR-80 should be extended a total of 24 months, from April 1, 1975 to April 1, 1977, and that the Commission should issue an Order to that effect.



L. Engle, Project Manager
Light Water Reactors Branch 2-3
Division of Reactor Licensing



A. Schwencer, Chief
Light Water Reactors Branch 2-3
Division of Reactor Licensing

Dated JUL 30 1975