

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of
CONSUMERS POWER COMPANY
(Midland Plant, Units 1 & 2)

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Docket Nos. 50-329
50-330

NRC STAFF TESTIMONY OF LAWRENCE P. CROCKER
RELATING TO DELAY OF CONSTRUCTION AND MAKE-
UP OF LOST TIME

Introduction:

This testimony provides my estimate of the time required to shut down and subsequently to re-start the construction of the Midland Plant in the event of a nine-month suspension of construction. I also discuss the question of whether Consumers Power Company could make-up for time lost during a suspension of construction.

Discussion:

Construction activity at the Midland Plant now is in full progress, with about 1200 workmen on site. Construction of both reactor containment buildings is underway and work is in progress on the auxiliary building, turbine building and associated plant structures. At the present time, the principal activities consist of placement of reinforcing steel and structural steel, and pouring of concrete.

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order of 3600-3800 Megawatts, thermal. In recent years, the other reactor vendors in the United States also have been offering nuclear steam supply systems in the range of 3000-3800 Megawatts, thermal. This no doubt is due in part to the emphasis of recent years on standardization of nuclear plant designs at or close to the maximum authorized power level of 3800 Megawatts, thermal.

Nuclear plants smaller than the Midland design have been constructed in the United States and I would judge that if a utility really wanted to order a smaller size unit today, any of the reactor vendors would be capable of supplying a NSSS of whatever size desired. I doubt, however, that purchase of a smaller unit is a realistic alternative. Since recent utility and vendor efforts have concentrated on larger units, both a time and a cost penalty would be incurred if a utility ordered a smaller plant. The entire cost of developing the design probably would have to be charged to the single smaller unit or the pair of smaller units since there apparently is no market for additional smaller units. Further, since units in a smaller size range have not been ordered for a number of years, extra time probably would be required for design, and it is likely that additional licensing effort would be required since the NRC staff would not be familiar with the design.

The Midland plant now is about 15% complete. We have been informed by the licensee that the bulk of the NSSS components are now on-site awaiting installation. Similarly, many of the balance-of-plant components

are either on-site or on order. Work on the reactor containment structures, the auxiliary building and the turbine hall is well underway. Under these circumstances, even though a smaller plant might be available for purchase, such action does not represent a viable alternative. The engineering and construction have thus far proceeded on the basis of the particular design for Midland. A change to a smaller unit would require essentially a complete new design with a consequent loss of the bulk of the engineering and construction efforts expended to date and a probable loss of a great portion of the component procurement to date.

If for some reason it should be determined that less power is needed from the Midland units, the present construction could be continued and the units ultimately could be operated at whatever power levels are desired up to the rated capacity. This continued construction of the current design would provide for ultimate expansion to meet increasing power needs. In my view, completion of construction of the present design, even though the forecasted power needs might be less than the plant rated capacity, would be far preferable to any attempt to redesign the station to accept smaller units.

Conclusion:

Continued construction of the Midland plant to the current design does tend to further preclude a subsequent change to a plant with a smaller output. However, for the reasons stated above, I consider such a change to be an infeasible course of action at the present time, so continued construction would not affect my conclusion.