50-329

Consumers Power Company

James W Cook
Vice President - Projects, Engineering and Construction

General Offices: 1945 West Parnall Road, Jackson, MI 49201 • (517) 788-0453

April 15, 1982

Harold R Denton, Director
Office of Nuclear Reactor Regulation
Division of Licensing
US Nuclear Regulatory Commission
Washington, DC 20555

MIDLAND PROJECT
LICENSING OF OPERATION PERSONNEL
FILE: 0926.3 SERIAL: 16609

The information below is supplied for your use in determination of the Consumers Power request for dual unit licenses for operating personnel on Midland Units 1 and 2. It is our understanding that such practice is normal where the units such as Midland are considered identical. We believe this information adequately justifies the dual unit operating licenses.

1. Similarity of Operating Procedures

   Separate procedures are provided for each unit for system operation, startup/shutdown, alarm response, and emergency/off normal conditions. The procedures are functionally identical for both units because the equipment is identical although some minor differences exist due to different equipment ID numbers and text phraseology. The emergency/off normal procedures are not yet written but it is our intent to make them identical, except for equipment ID numbers, and the information to be memorized by operators will be identical. The procedures will be written based upon a common ATOG, INPO writers guide, and Human Factors considerations.

2. Similarity in Response Characteristics

   Operating and transient response characteristics due to nuclear and NSSS hydraulic considerations will be virtually identical, differing only within design and manufacturing tolerances. The effects of secondary side imposed transients on Control Room operator actions will be the same for both units.

3. Technical Specifications

   It is our intent to have a common set of Technical Specifications, reflecting identical primary and primary support systems.

B001
s
1/0

4. Control Room Design

The common control room uses a modified mirror image configuration in a side-by-side arrangement. Units 1 and 2 share a common panel (OC10/20) located between the two units. Even though units 1 and 2 are configured as mirror images, the face of each individual panel is arranged the same for both units. For example, 2C12 and 1C12, reactor coolant panels, have the same arrangement. They are not mirror images. This feature will greatly simplify the task of an operator who has shifted from one unit to the other. There is essentially no chance of confusion for a qualified operator. When the correct panel has been located, all indications and controls will be in their familiar location.

Separation distance between the two units is sufficient to prevent confusion in operations. Space of 22 feet between units 1 and 2 control panels is physically divided by the OC10 "island" and the winged central operator's desk. An in-line configuration of the two control rooms forms a relative long, narrow room with low ceilings. The net effect is to fairly well isolate the two control rooms from mutual interference. With disciplined teams operating each unit, there is no evidence to suggest that colocation will be detrimental.

On the other hand, when coordinated action between the two units is required, the arrangement will be a definite advantage. Since both plants must share common cooling water services, these cooling systems can affect both plants at the same time. Colocation will aid supervisors in making decisions and directing actions in both plants. In case where one unit has difficulties but the other unit does not, there is an opportunity for one unit team to provide assistance to the other.

5. Similarities in System Designs

Most major systems are virtually identical on both units from an operating standpoint. These systems include:

reactor coolant

containment heat removal

containment isolation

combustible gas control

emergency core cooling

containment spray fission product control

reactor protection

ESFAS and ECCAS

safe shutdown outside the control room

incore monitoring

offsite power

onsite power

fuel transfer and handling

service water

component cooling water

demineralized water

borated water

chilled water

fire protection

safety-related display instrumentation	emergency diesel generators and auxiliaries
Nonsafety control (ICS, CRDCS, turbine control, computer, atmospheric steam dump, pressurizer control, loose parts monitoring, boron monitoring)	main steam
	feedwater
	condensate
Nuclear instrumentation	auxiliary feedwater

It may be noted that in the FSAR these systems have a single description which is applicable to both units. The only major systems that are different are the main turbine-generator and transformer, which differ mainly in size but otherwise are the same in configuration and required operator action. The Process Steam System is a common system and can be supplied from either unit. Unit 1 has the capability of supplying turbine extraction-steam to the Process Steam System.

The other major consideration is the short time frame between scheduled startup of the units. The present schedule provides for less than six months between the startup of the two units. It is our intent to keep this time between startups constant even if other aspects of the schedule are revised.

For the above reasons, it is our belief that dual operator licenses are appropriate. Your concurrence is requested. Please advise if further information is needed.

R A Wells, Executive Manager

For J W Cook

RAW/BLH/fms

CC RJCook, Midland Resident Inspector
RHernan, US NRC
DBMiller, Midland
RWHuston, Washington