

Enclosure 2

MFN 15-037

GEH Response to RAI 07-1

ABWR DCD DRAFT Revision 6 Markup

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automatic mode, all rod movements are controlled by the operator. However, the RCIS, by using a database called reference rod pull sequence (RRPS) and keeping track of the current control rods' positions, prompts the operator to the selection of the next gang.

When the RCIS is in manual mode and ganged rod movement mode has also been chosen, if the operator selects a specific rod in a gang, the logic will automatically select all associated rods in that gang.

When the automatic mode is active, the RCIS responds to signals for rod movement request from the APR System. In this mode, the APR simply requests either reactivity insertion or withdrawal. The RCIS responds to this request by using the RRPS and the current rods' positions and automatically selects and executes the withdrawal/insert commands for the next gang.

In order for the automatic rod movement feature of the RCIS to be active, the power generation control system must be in the automatic mode, the automatic power regulator system must be in the automatic mode, and the switch on the RCIS dedicated operator interface for automatic rod movement mode must be depressed. The operator has an option of discontinuing the automatic operation by placing either the PGCS/APR or RCIS mode switches back to manual mode.

(5) Ganged Withdrawal Sequence Restrictions

The RWM of the RCIS ensures adherence to certain ganged withdrawal sequence restrictions by generating a rod block signal for out-of-sequence rod withdrawals. These types of restrictions are specified as follows:

- (a) The ganged rod mode consists of one or two sets of fixed control rod gang assignments. The two sets of rod gang assignments correspond to sequences A and B of the ABWR ganged withdrawal sequence, as specified in the reactivity control document.
- (b) The system allows up to 26-rod gangs, for control rods in rod groups 1, 2, 3, and 4, to be withdrawn simultaneously when the reactor is in the startup mode. These withdrawals are permitted only under the following conditions:
 - (i) Reactor power level is below the low power setpoint (LPSP).
 - (ii) A group 1, 2, 3, or 4 gang of rods is selected. Only one group at a time is allowed for normal rod movement.
 - (iii) ~~Groups 1-4 may only be withdrawn before groups 5-10 are in the full-in position.~~ Groups 1-4 must be fully withdrawn before groups 5-10 can be withdrawn from the full-in position.