



Graphic courtesy of Marine Biocontrol Corp.

## CWS Configuration During a Thermal Backwash (TBW)

To perform a backwash of the Circulating Water System (and condenser), reactor power is lowered to 50%, one CW pump is secured, the outlet waterbox crossover valves are opened, the waterbox outlet valves are closed, and two of the four traveling screens are rotated in reverse. This causes seawater from the intake to flow from one half of each condenser shell, through the outlet crossover valve, backwards into the other half of each condenser shell, and out through the idle CW pump past the reversed screens to the intake. Once the plant is in the backwash line-up, reactor power can be increased in order to perform a thermal backwash – the red (dark) area shows the “B” side of the CWS being heat-treated. The key differences between a “regular” and “thermal” backwash are that: the temperature of the backwash water is elevated ( $> 105^{\circ}\text{F}$ ) by raising power, the heat-treatment is maintained for a specific length of time ( $> 35$  minutes), and the evolution is coordinated with the highest possible tide ( $> 10$  ft.) to achieve maximum “coverage” against mussels growing in the upper elevations of the intake structure.