


Jersey Central Power & Light Company



MADISON AVENUE AT PUNCH BOWL ROAD • MORRISTOWN, N. J. 07960 • 201-539-6111

MEMBER OF THE
General  Public Utilities Corporation

October 16, 1973

Mr. Donald J. Skovholt
Assistant Director for Operating Reactors
Directorate of Licensing
United States Atomic Energy Commission
Washington, D. C. 20545



Dear Mr. Skovholt:

Subject: Oyster Creek Station
Docket No. 50-219
Shutdown Margin Tests

This is to inform you of the results of the shutdown margin demonstration performed for the Oyster Creek reactor core on September 27 and 28, 1973, as requested in your letter of September 7, 1973, confirming your call to Mr. J. T. Carroll, Jr., on September 6, 1973.

Control rod worth curves for various control rod combinations were calculated in order to determine the amount of shutdown margin that could be demonstrated by withdrawing, fully, the second control rod of a set of two (2) diagonally adjacent control rods. The values range from about 1.8% $\Delta k/k$ for the control rod adjacent to the strongest rod and about 1.0% $\Delta k/k$ for the weakest adjacent control rod. (See attached figures).

The reactor was in the cold shutdown condition with coolant temperature in the range of 140° F. to 158° F. This temperature range was maintained in order to meet Technical Specification 3.3.B., "Reactor Vessel Head Boltdown". Since the reactor was shut down on September 7, 1973, and approximately 20 days had elapsed prior to the demonstration, the equilibrium sumarium, xenon free condition existed.

Thus, by withdrawing each control rod as a pair of two (2) diagonally adjacent control rods, the shutdown margin was verified to be at least the required .75% $\Delta k/k$. As predicted, the reactor remained subcritical during all demonstrations.

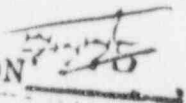
Very truly yours,

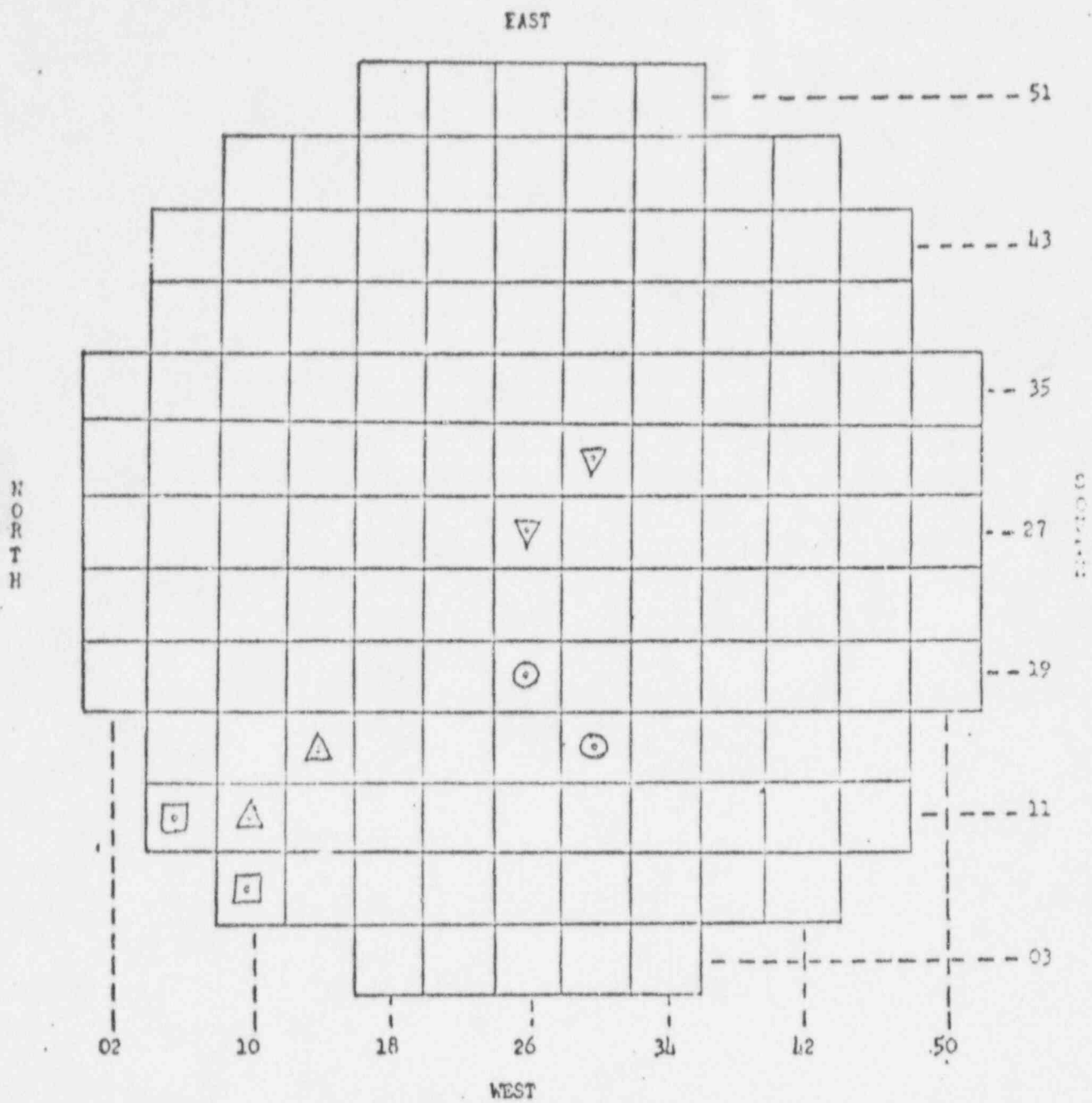
Donald A. Ross
Manager, Nuclear Generating Stations

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Attachments

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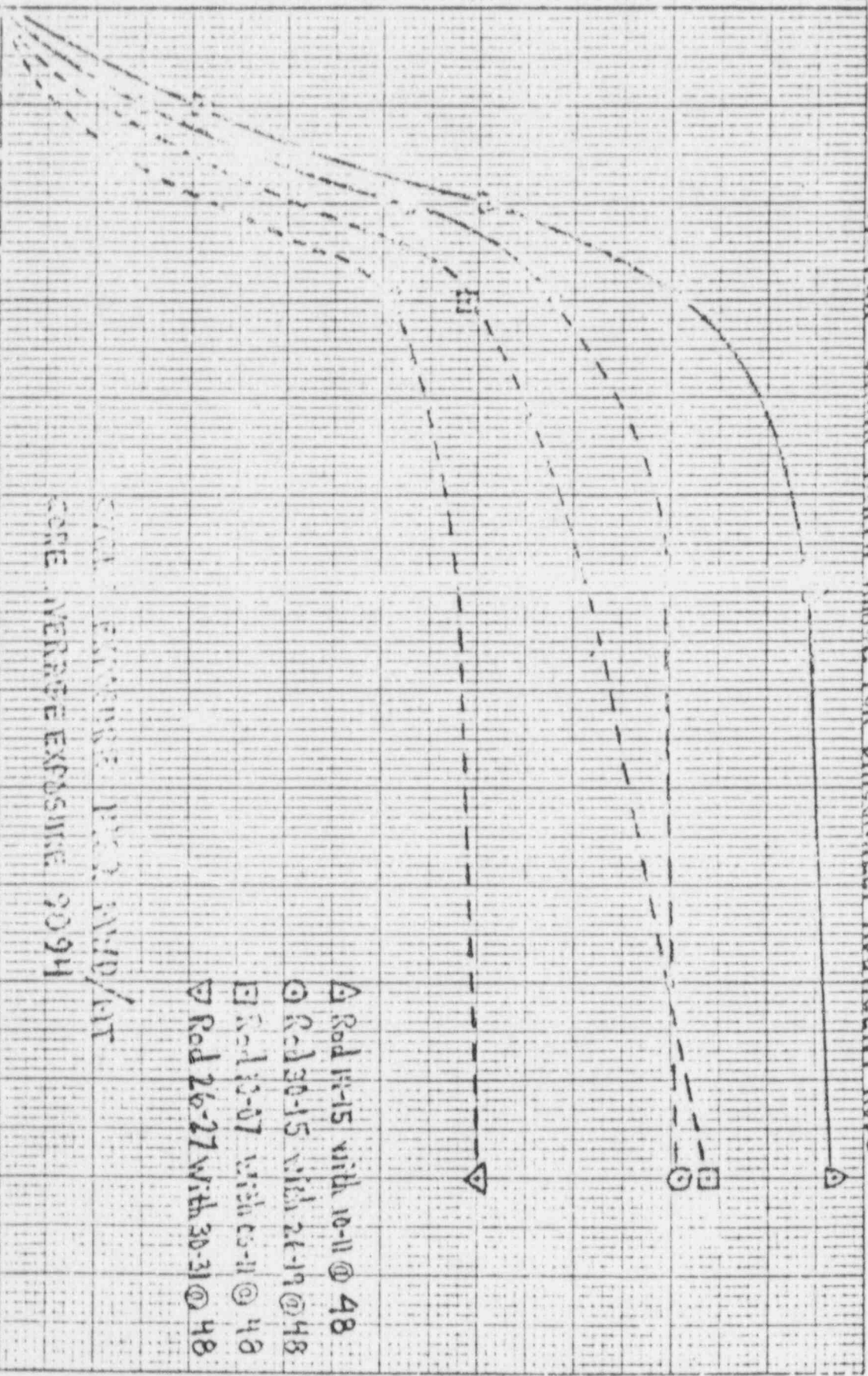


CORE ARRANGEMENT
CONTROL CELLS
TOP VIEW

FIGURE 1

ROD NORTH

OYSTER CREEK WORTH BRIDGE FOR DIAGONALLY ADJACENT RODS



- △ Rod 11-15 with 10-11 @ 48
- Rod 30-15 with 21-19 @ 48
- Rod 13-07 with 05-11 @ 48
- ▽ Rod 26-27 with 30-31 @ 48

CORE AVERAGE EXPOSURE 909H
 CORE EXPOSURE PER 2 WIND/ROT

0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 3.9 4.0 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9 5.0

WIND DIRECTION

9-12-73