50-320

ISOMEDIX

June 9, 1976

Dr. S. Carfagno
Performance Qualification Laboratory
Franklin Institute Research Laboratories
20th and Cherry Streets
Philadelphia, Pa. 19103

Dear Dr. Carfagno:

This will summarize parameters pertinent to the irradiation of a mandrel wrapped with cables per your project C4350, and Order Number 20630, dated April 29, 1976.

The mandrel was placed in a Cobalt-60 gamma field such that the average dose rate over the total exposure period was 350,000 rad per hour. The unit was exposed for 571 hours, yielding a minimum dose of 200 Mrad to the cable.

The mandrel was rotated 90° at intervals of 143 hours of exposure. Irradiation was conducted in air at ambient temperature and pressure. Radiant heat from the source heated the samples somewhat, but the temperature did not exceed 100°F, as indicated by previous measurements on an oil solution in the same relative position.

Dosimetry was performed using a Victoreen Model 555 Integrating Dose Rate Meter and Probe. The unit was calibrated on October 16, 1975 by the Victoreen Instrument Company, using cobalt-60 and cesium-137 sources whose calibrations are traceable to the U.S. National Bureau of Standards. A copy of the calibration certificate is available. Backup dosimetry using a Red Perspex system confirm the Victoreen readings.

Irradiation was completed on June 3, 1976, and the assembly was picked up by a FIRL representative on June 4.

Very truly yours,

2220 023

George R. Dietz
Manager, Radiation Services

GRD:km

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POOR ORIGINAL

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