


Predicted tide correctors were then applied to the drag depths obtained. These predicted tide correctors were generated onboard with the ship's Digital PDP 11/34 computer and predicted tide tapes for 1983 and 1984. These tide tapes were supplied to the ships by NOAA231. Hardcopy printouts of the predicted tide correctors used during this survey are included in the data file. ✓

Tidal currents were closely monitored during the course of this survey, since launch drag operations had to be run with the predominate current flow at depth to result in satisfactory lift data. Comparisons were made with the Tidal Current Tables, 1983, Atlantic Coast of North America for station 2681 and the Tidal Current Charts, Long Island Sound and Block Island Sound for station 96. In general, the times and strengths of maximum flood and ebb and times of slack water at the surface agreed with the predicted times and strengths under normal conditions. However, at depth the currents generally reversed and would flow in a contrary direction approximately one hour prior to the time



of surface slack water. This phenomenon was generally observed within one meter of the bottom during the flood and ebb. This condition was not anticipated by the launch operators initially and resulted in the rejection of some data as a result of unsatisfactory lifts. With experience, these bottom counter currents were compensated for by running the drass into the surface currents approximately one hour before slack. This generally resulted in acceptable drag data since the bottom current appeared to have the greatest effect on the drag. ✓

Northerly and southerly winds appeared to have minimal effect on the tidal currents, probably attributable to the east-west orientation of the Long Island Sound basin. However, easterly and westerly winds brought about nontidal currents which considerably influenced the predicted tidal currents. Easterly winds appeared to prolong the flood on the surface but also resulted in the reversed bottom current appearing several hours earlier than under normal conditions. Prolonged periods of westerly winds would generally result in opposite conditions. ✓

In general, the surface tidal currents as depicted in the Tidal Current Charts and the Tidal Current Tables were closely observed during the entire project and appear to be accurately described. However, the tidal currents at depth appear to flow contrary to the surface current commencing about one hour prior to slack. The masters of deep draft vessels approaching the Northville Terminal during anticipated slack water conditions will probably experience a well established current at depth. ✓