

#### D. TIDES INFORMATION

The tidal datum for this survey is mean lower low water (MLLW). The operating tide gages at Annapolis, MD. (857-7330) and Solomons Island, MD. (857-5512) provided direct control for hydrographic operations and served as control for datum determination for all subordinate stations during work on this project. ✓

The subordinate gage located at Chesapeake Beach, North Beach (857-6363) was established on April 29th, 1987. Opening levels were run to five (5) previously established benchmarks on April 29th. ✓

On June 25th the gage to staff elevation difference was erroneously adjusted to make the gage reading agree with the staff reading. Upon discovery of this error a three hour gage to staff comparison was performed to establish a new baseline reading of the gage to staff. The results of that observation are attached to the field tide note found in Appendix IG of this report. ✓

On August 3rd, the ship was informed by the contract tide observer of a gage malfunction. The gage was subsequently inspected and found to be jammed due to swelling of the paper as a result of high humidity. Several feet of the paper were removed and the gage was restarted. ✓

The ship was also notified on August 3rd that the breakwater on which the floatwell and gage were installed was scheduled for removal and replacement in mid-August. On August 6th, ship's personnel leveled out the gage site and relocated the gage approximately 600 feet south of the old site. Benchmark 10 was not included in the closing level run at the old gage site since the mark had been covered by an air-conditioning unit. Levels were rerun to open the new gage site. Because benchmark 9 was scheduled for destruction as part of the breakwater removal it was not included in the new opening level run. (See Appendix IG for a copy of the Field Tide Note).

Predicted tides were generated by HDAS using the 1987 NOS Tide Tables with time and height correctors supplied in the preliminary tidal zoning chartlet provided with the project instructions. A request for smooth tides was made to N/MOA12 on November 16, 1987. See Appendix IG for tides information.