

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.

For the items in this report, a subordinate station located at Chesapeake Beach, MD. (857-6363) was also utilized. Data from this station was sent in periodically and the gage itself was routinely observed by a contract tide gauge observer. The gage was established on April 29, 1987 with an opening level run to five (5) previously established benchmarks.

On June 25, 1987, a ship's employee adjusted the gage to agree with the staff reading. A subsequent three hour gage to staff comparison was run to reestablish the baseline reading of the gage to staff. The results of that comparison are in Appendix IG. DATA REMOVED FROM ORIGINAL DESCRIPTIVE REPORT AND FILED WITH FIELD RECORDS

On August 3, 1987, the contract tide observer notified the ship that the tide gage was malfunctioning. Upon observation by ships personnel it was discovered that the paper had swelled due to high humidity and was not advancing. The problem was solved and the

gage resumed normal operation. On the same date, ship's personnel were also notified that the bulkhead upon which the gage was mounted was scheduled for demolition and that the gage would have to be moved. On August 6, ships personnel leveled out the gage site and relocated the gage approximately 600 feet south of the old site. Benchmarks 9 and 10 could not be used on the new opening levels due to scheduled removal and obstructions. Benchmark 9 was used on the closing level for the old gage site.

Following completion of the project, the tide station at Chesapeake Beach, MD was removed. On November 24, a closing level was run on three benchmarks used to run the opening level with a difference of 0.001 meters obtained.

The operating station at Baltimore, Maryland was the reference station used for predicted tides.

Predicted tides were generated by HDAS from high and low water times and correctors input from the 1987 NOS Tide Tables. Time and height correctors for the immediate vicinity of items being investigated were obtained from the preliminary tidal zoning chartlet supplied to the HECK with the project instructions. A request for smooth tides was made to N/MOA12 on December 4, 1987 (see Appendix IG for tides information and field tide note). DATA REMOVED FROM ORIGINAL DESCRIPTIVE REPORT AND FIXED WITH FIELD RECORDS.

HORIZONTAL POSITION CONTROL