

Horizontal & Vertical Control Report

*Type of Survey*____Navigable Areas & Field Examination_____

*Project No*____OPR-G309-NRT2-07_____

*Time Frame*____Sept. 2007 to Jan. 2008_____

LOCALITY

State _____North Carolina_____

*General Locality*____Wilmington_____

2007

CHIEF OF PARTY

David B. Elliott – Team Leader

Library & Archives

DATE _____

Horizontal & Vertical Control Report **Title Sheet**

Project No ___ OPR-G309-NRT2-07 _____

Date of Project Instructions ___ September 24, 2007 _____

Vessel ___ NOAA Launch 1210 _____

Field Unit ___ Navigation Response Team 2 _____

Chief of Branch ___ LCDR. Lawrence T. Krepp

Chief of Party ___ David B. Elliott – Team Leader _____

Vertical and Horizontal Control Report

OPR-G309 -NRT2-07

Calendar year 2007, Wilmington, NC

A. Vertical Control

No tide stations were established by NRT2 during the course of this survey.

The following is a list of Tide Stations for the hydrographic surveys conducted in Cape Fear River, Wilmington, NC.

<u>Site</u>	<u>Location</u>
Sunset Beach 865-9897	33° 51.9' N 078° 30.4' W
Wilmington 865-8120	34° 13.6' N 077° 57.2' W
Southport 865-9084	33° 54.9' N 078° 01.1' W
Springmaid Pier,SC 866-1070	33° 39.3' N 078° 55.1' W

Applications of Correctors

Field soundings are corrected by verified tides data from NOAA/CO-OPS.

The Real Time Actual 6 min Tides are downloaded from:

"http://co-ops.nos.noaa.gov/data_res.html", for all gauges required in the given projects defined by the ZDF file provided in the project letter, and instruction. Tide values are downloaded in blocks of data that covers the Times of Hydrography, and saved in a text file format. The MapInfo program is then used with the "HYDRO_MI" pre-Survey function, of "Create Cowlis", this function converts the text file into a Caris tide file (.tid). The final soundings have discrete zoning (smooth tides) applied with ZDF from NOAA/CO-OPS.

A Request for Approved Tides letter was sent to <smooth.tides@noaa.gov> on Jan. 10, 2008. This request also includes the CORP.tab, the STNP.tab and LABP.tab all found (Appendix IV). Final tidal zoning approval e-mail was received on Jan 25, 2008.

The time meridian is 75° for this survey.

All elevations and soundings for OPR-G309 are based on MLLW unless otherwise specified.

There were no unusual tidal or current conditions noted during this survey.

Ellipsoidal benchmark positioning techniques were not required this project.

B. Horizontal Control

The horizontal control datum for this project is the North American Datum (NAD) of 1983 in UTM. The control reference station used for this survey was the USCG DGPS Beacon.

There were no horizontal control stations established by NRT2 during the course of this survey.

Differential GPS (DGPS) was used for all hydrographic data acquired on this survey. DGPS performance checks were conducted in accordance with the FPM & Hydrographic Survey Specs. & Deliverables. Comparing the DGPS position of the vessel to the position of a Trimble Backpack Calibration Point created by NRT2 performed the data quality assurance check for the navigation system.

E. APPROVAL SHEET

**Vertical and Horizontal Control Report
OPR-G309-NRT2-07
And accompanying surveys for Calendar year 2007**

Vertical and Horizontal Control Report information and all accompanying records and data are approved.

Submitted by:

**David B. Elliott - Team Leader
Navigation Response Team 2**