Vertical Control

All sounding data were initially reduced to mean lower low water (MLLW) using unverified tidal data from one tide station located on Mitrofania Island, AK. A sub-contractor, John Oswald & Associates LLC (JOA), operated the gauge.

Table 3 – Tide Gauges

Gauge	Model	Gauge Type	Location	Latitude	Longitude	Operational
9459016	H350/355	Digital Bubbler	Mitrofania Island, AK	55°53'22"N	158°49'11" W	May-July

Table 4 – Final Tide Zones

Zone	Primary			
	Site	Number	Time	Range Ratio
JOA001	Mitrofania Island, AK	9459016	0	1.00
JOA002	Mitrofania Island, AK	9459016	-6	1.00
JOA003	Mitrofania Island, AK	9459016	-6	1.07
JOA004	Mitrofania Island, AK	9459016	-12	1.00
JOA005	Mitrofania Island, AK	9459016	-12	1.07
JOA006	Mitrofania Island, AK	9459016	-12	1.14

Tidal data for a twenty-four hour period, UTC (Alaska Daylight Time to UTC was +8 hours), was assembled by JOA and e-mailed to the Ocean Pioneer at the end of every Julian Day. A cumulative file for the gauge was updated each day by appending the new data.

On September 9, 2006, JOA issued verified tidal data and final zoning for OPR-P182-KR-06. The tidal zoning was modified by JOA, providing a simpler zoning scheme from those issued in the Statement of Work (for additional information, refer to JOA's Final Technical Report). From September 20, 2006 to September 22, 2006 all sounding data were re-merged using CARIS HIPS and SIPS tide routine. Verified tidal data were used for the final Navigation Base Surfaces and S57 Feature files.[12] Refer to the Vertical and Horizontal Control Report for additional tidal information and station descriptions.