| Surface Name | Surface Type | Resolution | Depth Range | Surface Parameter | Purpose |
|------------------|-----------------|------------|----------------------------|----------------------|------------------|
| H12549_32m_Final | CUBE | 32 meters | 320 meters - 640 meters | NOAA_32m | Complete MBES |

Table 9: Submitted Surfaces

The surfaces have been reviewed where noisy data, or 'fliers' are incorporated into the gridded solution causing the surface to be shoaler than the true seafloor. Where these spurious soundings cause the gridded surface to be shoaler than the reliably measured seabed by greater than the maximum allowable TVU at that depth, the noisy data have been rejected and the surface recomputed.

The NOAA CUBE parameters mandated in HSSD were used for the creation of all CUBE BASE surfaces in Survey H12549.

C. Vertical and Horizontal Control

Additional information discussing the vertical and horizontal control for this survey can be found in the accompanying HVCR.

C.1 Vertical Control

The vertical datum for this project is Mean Lower Low Water.

Standard Vertical Control Methods Used:

Discrete Zoning

The following National Water Level Observation Network (NWLON) stations served as datum control for this survey:

| Station Name | Station ID |
|------------------------|------------|
| Unalaska, Dutch Harbor | 9462620 |
| King Cove | 9459881 |

Table 10: NWLON Tide Stations

| Station Name | Station ID |
|-------------------|------------|
| Broad Bight | 9462676 |
| SE Tigalda Island | 9462705 |
| Green Bight | 9462786 |

The following subordinate water level stations were established for this survey:

Table 11: Subordinate Tide Stations

| File Name | Status |
|-------------|-------------------|
| 9462676.tid | Verified Observed |
| 9462705.tid | Verified Observed |
| 9462786.tid | Verified Observed |

Table 12: Water Level Files (.tid)

| File Name | Status |
|------------------------------------|-------------|
| OPR-Q191-KR-13_Zoning_20131008.zfd | Preliminary |

Table 13: Tide Correctors (.zdf or .tc)
(.zdf or .tc)</td

On October 08, 2013, John Oswald and Associates (JOA) issued verified tidal data and zoning for OPR-Q191-KR-13. All sounding data was then re-merged using CARIS HIPS and SIPS tide routine. JOA verified tidal data were used for all final Navigation BASE surfaces and S-57 Feature files. It should be noted that the tidal data applied to OPR-Q191-KR-13 is JOA verified and not CO-OPs verified. JOA are currently in the WALI verification process, which is pending, awaiting CO-OPs approval. Since the timeframe for CO-OPs verification is unknown, FPI were given approval, by our COTR, to submit the data with the JOA verified tides and zoning applied.

CO-OPs approved the JOA verified tidal data and zoning on January 30, 2014.

C.2 Horizontal Control

The horizontal datum for this project is NAD83.

The projection used for this project is UTM.

The following PPK methods were used for horizontal control: