



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Admin.
National Ocean Service
Office of Ocean Resource Conservation and Assessment
Hazardous Materials Response and Assessment Division
c/o EPA Waste Management Division (HEE-6)
J.F. Kennedy Federal Building
Boston, MA 02203
6 January 1997

Ms. Kymberlee Keckler
U.S. EPA Waste Management Division
J.F. Kennedy Federal Building
Boston, MA 02203

Mr. Mark Evans
U.S. Department of the Navy
Northern Division - NAVFAC
10 Industrial Highway
Code 1811/PO - Mail Stop 82
Lester, PA 19113-2090

Dear Kymberlee/Mark:

Thank-you for the Goss Cove Follow-Up/Mamacoke Cove Habitat Evaluation, Naval Submarine Base New London dated 18 December 1996. The Goss Cove findings were encouraging in that the measured Dissolved Oxygen (10 mg/L) clearly will support aquatic life. Hence, DO likely is not the factor restricting the pelagic (benthic?) diversity in the Cove (see NOAA letter dated 11 November 1996 that states "Although sediments in Goss Cove could adversely impact aquatic biota, the SEM/AVS data indicating that factors other than the presence of cadmium, copper, nickel, lead, or zinc (organics, DO?) may be responsible for the observed adverse effects.").

The Goss Cove Habitat Evaluation dated 30 October 1996 indicated limited diversity. The sediment is rich in hydrogen sulfide thereby likely inhibiting a diverse benthic community. Similarly, the bottom sediment at Mamacoke Cove, an apparent analogue to Goss Cove, showed a strong sulfide odor. Yet Mamacoke Cove contained an apparent diverse and healthy community of bottom organisms. Hence, other factors, including the inorganic contamination may be the cause of the limited biological life in Goss Cove. But the flow into the inner portion of Mamacoke Cove, although limited, likely is much greater than the flow through the railroad revetment at Goss Cove thereby providing more access for estuarine natural resources.

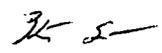
More discussion is necessary before a remedial plan for Goss Cove is considered. Questions that need to be answered include, but are not limited to,

- Should Goss Cove and inner Mamacoke Cove show similar biological life?
- What is limiting the diversity in Goss Cove?
- Are physical or chemical factors (or both) impacting Goss Cove?
- Will opening the revetment at Goss Cove improve the habitat, will contaminants become more available or more dilute?

It is likely that another round of sampling within Goss Cove may be useful. A better understanding

of the nature and extent of the contamination may assist in answering these questions. Lastly, it is not clear what the salinity in Goss Cove and the adjacent Thames River is. The subject document lists the salinity at 2.2 ppt while the Phase II Remedial Investigation states it is 28-30 ppt. Please let me know if you have any questions.

Sincerely,



Kenneth Finkelstein, Ph.D.

cc: Patti Tyler (EPA)