Harris & Associates
Program Managers
Construction Managers
Civil Engineers

September 10, 2008

Mr. Keith Raybould
MBARI
7700 Sandholdt Road
Moss Landing, CA 95039-9644

Re: Addendum - Engineering Report for Sanitary Sewer System
Moss Landing Island, California

Dear Keith:

As requested, we have prepared this addendum to the referenced report to clarify the current and projected wastewater requirements for the existing and proposed MBARI buildings at Moss Landing.

In particular, the following clarifications are provided:

Current Uses:

As detailed in the attached report, the existing MBARI research buildings at Moss Landing have 230 staff members and contain approximately 106,300 square feet of Marine Lab space. They currently use approximately 4,479 GPD of water, based on water meter readings for a 3 month period in the winter months of 2007.

Phil's Restaurant, containing approximately 12,000 square feet, is located on a site to become a future MBARI building, uses approximately 6,764 GPD of water, based on water meter readings for the same 3 month period.

Current wet weather waste water flows from the island, measured over the same 3 month period, were approximately 25,600 GPD in comparison to water meter readings for the entire island of 16,972 GPD during the same period. This indicates an average daily infiltration into the wastewater collection system of approximately 8,628 GPD. It is noteworthy that wastewater generated from a commercial sites such as MBARI would normally be 10-25% less than water meter readings due to human use, water used in the research process, irrigation, etc.

The existing wastewater allocation for Service Area #3 in the Monterey County Moss Landing Sanitation District is 14,000 GPD Wet Weather Flow. Based on As-Built plans provided by the County for the wastewater collection system on the island, we have estimated a physical hydraulic capacity of approximately 605,000 GPD in the existing 8-inch mainline and approximately 480,000 GPD in the pump and 4-inch force main which serve the island. Therefore, it appears that the physical capacity of the collection system on the island far exceeds the existing allocation.

Masterplan Impact on Capacities:

The construction of additional MBARI buildings, as shown on the current Masterplan, will have the following impacts on current wastewater generation, based on the current measured water use of 45 GPD per 1000 square feet for the existing MBARI buildings:

- The construction of proposed MBARI Building H, which is proposed to have 57,000 square feet, will require approximately 2,565 GPD of additional wastewater capacity.

- The construction of proposed MBARI Building G, which is proposed to have 34,000 square feet, will require demolition of Phil's restaurant, thereby reducing wastewater generation from the island by approximately 6,764 GPD currently being generated by the restaurant. The new building will require approximately 1,530 GPD, which still results in a net decrease in wastewater flows into the island system of approximately 5,234 GPD.

- The construction of proposed MBARI Building J, which is proposed to have 66,500 square feet, will require approximately 2,993 GPD of additional wastewater capacity.

Please give me a call if you have any questioins. Thanks for the opportunity to be of service!

Sincerely,
Harris & Associates

Michael K. Cooper, PE
Vice President