EVANS-HAMILTON, INC.

SEDIMENT AND PARTICLE TRACERS

The movement and transport of sediment and particles in water is a critical concern for many projects. EHI has formed a strategic alliance with **Environmental Tracing System, Ltd. (ETS)**, to provide sediment and particle tracing services for the dredging, marine and environmental industries in the US. The two companies offer very complimentary skills and have a combined history of over 50 years of working in the marine data collection industry. By joining forces, they have streamlined the process of providing tracing services in North America and are able to provide turnkey projects. ETS, as clear market leaders

in the field, offers innovative particle tracing technology successfully utilized on more than 100 contracts worldwide. EHI provides experienced data collection solutions and project management in a wide range of environments to meet their client's needs. Recent projects have shown that combining tracing technology with comprehensive oceanographic data collection programs provides an enhanced understanding of complex circulation, sediment, and particle transport issues.

ETS's tracer technology consists of using fluorescent tracer particles that can be manufactured to match the size, density, and texture of almost any natural particle from sediments (clays, silts and sand) to bacteria. The tracer particles are environmentally inert and do not pose an environmental concern. They can be deployed in a variety of ways depending on what suits the project needs. Once the particles are deployed, a series of sampling events are conducted in which sediment and/or water samples are collected on a defined grid. The samples are then analyzed to determine how much of the sediment exists (or does not exist) in a given location. Because of the way the particles are manufactured and analyzed, it is possible to get very low detection limits on the tracer. This means that the volume of tracer required is significantly smaller than with traditional tracing techniques. This technology can be very effective at determining the short- and long-term movement of sediments over large areas.

Applications include:

- Measuring sediment transport regimes in rivers, channels, and harbors
- Determining longshore transport direction and magnitude
- Monitoring fate and transport of sediments associated with dredging, etc.
- Outfall studies
- Monitoring the transport and fate of contaminated sediments

For more information on ETS and their tracer technology please go to their website: http://www.environmentaltracing.com.