LOIS RACS(C) Core Programme
Sea Vigil SV 13
Cruise Report
19th-23rd September 1994

Personnel:

Robb Howland (PML)
Duncan Plummer (PML/LOIS Hull)
Rhu Nash (U of Southampton)
Jeremy Hoad (U of Hull)

Monday 19th: The LOIS personnel traveled to Hull. From 1730 to 2000 the equipment was loaded aboard *Sea Vigil* and initial commissioning commenced.

Tuesday 20th: The scientific party boarded at 0800 and continued to commissioning the nutrient analyser. The *Sea Vigil* departed Hull Marina for the down stream survey at 0915. The survey started at 1044 (station 17) and continued eastwards until 1241 (station 28). A series of vertical profiles stations for optical properties were then undertaken. Due to bad weather only 4 out of the 10 profile stations were visited (VP1, VP2, VP10 & VP11). At 1453 the nutrient survey recommenced (station 30) for the westwards passage. Having passed through all the stations back to Hull the survey was completed at 1644 (station 18).

The profile measured nutrients (nitrate, nitrite, phosphate, silicate and ammonium) conductivity, temperature, turbidity, pH and dissolved oxygen. Discrete samples were collected for gravimetric, C/N, chlorophyll and Al analysis.

The *Sea Vigil* locked into the Marina at 1715 and equipment from U. of Southampton was unloaded. The party disembarked at 1800.

Wednesday 21st: From 0400 to 0500, when the *Sea Vigil* left the Marina, the analysers were set up and standards recorded. The survey was from Hull at 0516 (station 16) to Selby (station 40) at 0850. The survey was repeated downstream. Starting at station 40 at 0855 and completed at station 16 at 1243.

The profile measured nutrients (nitrate, nitrite, phosphate, silicate and ammonium) conductivity, temperature, turbidity, pH and dissolved oxygen. Discrete samples were collected for gravimetric, C/N, chlorophyll and Al analysis. Samples were collected for Karen Evans at the Apex, Aire Confluence and the Turbidity Maximum on the upstream passage.

The *Sea Vigil* tied up along Admiral Steps at 1315 until 1715 when it locked into the Marina. In addition to equipment being decommissioned and packed during this period analysis of the Al samples was started.

Thursday 22nd: The party assembled on board at 0830 and *Sea Vigil* departed Hull Marina at 0900. The flux curtain was reached at 1100. Between 1117 and 1410 grab samples were collected from the stations across the flux curtain. The Grab on the *Sea Vigil* was used. The surface waters were monitored (conductivity, temperature, turbidity, pH, dissolved oxygen *etc*) using the NRAs system. Samples were collected at all station except station a, the water was to shallow. Due to differing depth of sample collected in the grab, and to be comparable between stations, only the top 1-2

cm of sample was collected. In addition the complete sample was collected at 2 stations (b & o).

Between 1410 and 1725 to take advantage of the fine weather ground truth measurements were made by the NRA to coincide with overflights from their aircraft.

After the *Sea Vigil* locked into the Marina at 1915 the equipment was unloaded.

Friday 23rd: Contingency day

Notes:

This was the ninth LOIS RACS(C) Core Programme survey of the Humber and Ouse.

The programme was altered due to bad weather with the sediment work being relocated from Monday 19th to Thursday 22nd. Weather also affected the programme on Tuesday 20th when it restricted work off the mouth of the Humber.

The nutrient survey has been extended up the Ouse as far as Selby. All nutrient stations were visited at least once.

The help and flexibility of Peter Sarjeant and Tim Rhodes (NRA *Sea* Vigil) greatly helped in the success of the programme.

Duncan Plummer 26th September