



**LOIS RACS(C) Core Programme
Sea Vigil SV 22
Cruise Report
26th-30th June 1995**

Personnel:

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Helen Rouse (U of Hull)	
Nick Hughes (U of Hull)	
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Tim Fileman (PML)	
Jun Zhou (PML)	
Sheila Evans (PML)	

Monday 26th: Between 1615 and 1845 scientific equipment was loaded on board the vessel and commissioned for the work on Tuesday.

Tuesday 27th: The scientific party was on board at 0330 and the *Sea Vigil* departed Hull Marina at 0350. The first station, Swinefleet, was sampled at 0555. A total of 8 stations were sampled in the Ouse, Trent and upper Humber. The vessel passed Hull at 1145 and proceeded downstream to Spurn Head. The organic micropollutants work continued at 1415 as the vessel returned upstream. A further 8 stations in lower Humber completed the survey (1610). Samples of water, sediments and suspended particles were collected for later determination of organic micropollutants. The surface waters were monitored using the NRAs system to record the standard variables. The *Sea Vigil* locked into the Marina at 1815 and was made fast at 1630. After unloading the party departed the vessel at 1900.

Wednesday 28th: The party mustered at 0830 and the *Sea Vigil* locked out of Hull Marina at 0930. The downstream survey started at station 17 (0951) and continued seawards to station 28 (1233). The survey then went out of the estuary into the plume region and included stations VP1, VP2, VP3 and VP9. The survey continued to station 30 (1353) and ended at station 17 (1635). The survey measured nutrients (nitrate, nitrite, phosphate, silicate, ammonium and urea), conductivity, temperature, turbidity, pH and DO. Discrete samples were collected for gravimetric, C/N and chlorophyll analysis. In addition samples were collected for phytoplankton enumeration and identification. Large volume samples were collected at stations 24, 26, 28, 30, 32, 34, VP1, VP2, VP3 and VP9 for later incubation experiment.. The *Sea Vigil* locked into the marina at 1815 and was along side at 1830.

Thursday 29th: The party mustered on board at 0430 and *Sea Vigil* departed Hull Marina at 0500. The upstream survey commenced at station 16 (0517) and continued to station 40 (0844) and returned downstream and ended at station 16 (1250). Stations sampled 16-1, 38-40, 40-38, 1-16. The nutrient survey, as Wednesday consisted of discrete samples collected at the core stations. These will be analysed at PML and U of Southampton. Discrete samples were taken at all stations for gravimetric, C/N and chlorophyll. The *Sea Vigil* tied up along side Admiral steps at 1305, samples and U of Southampton equipment was unloaded. At 1320 the vessel left the Steps bound for Grimsby. Between 1600 and 1600, when the *Sea Vigil* entered Grimsby Fish Dock, the ADCP was tested prior to Fridays programme. The

vessel was along side at 1630 and from 1700 PML equipment and nutrient samples were transferred to *Challenger*.

Friday 30th: The scientific party was on board at 0530 and the *Sea Vigil* left Grimsby Fish Dock at 0900. At 1653 (flux curtain station B) the ADCP was installed into the moonpool. The survey commenced at 0700 (station A) and 13 transects of the flux curtain were completed (A-O). The survey was completed at 1930. The *Sea Vigil* was along side at 2030 and all personnel had disembarked by 2045.

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

The nutrient survey consisted of discrete samples collected at all stations for later analysis by PML and U of Southampton.

The week included the third collection of samples for determination of production parameters. For the first time this sampling was extended into the Humber plume region.

The fourth of a series of seasonal (quarterly) surveys investigating the distribution of organic micropollutants was completed.

A combined LOIS NRA ADCP survey across the mouth of the Humber was undertaken.

The help and assistance of Peter Sarjeant and Tim Rhodes (NRA *Sea Vigil*) is acknowledged.

Duncan Plummer

4th July 1995