



**LOIS RACS(C) Core Programme
Sea Vigil SV 25
Cruise Report
25th-29th September 1995**

Personnel:

Duncan Plummer (PML/LOIS Hull)	Senior Scientist
Bek Bellerby (PML)	
Neil Hudson (PML)	
Peter Shaw (U of Southampton)	
Pedro Defrietas (U of Southampton)	
Tim Fileman (PML)	
Sheila Evans (PML)	
Pepe Alvarez-Salgado (PML)	
Reg Uncles (PML)	
Norman Bowley (PML)	
John Stephens (PML)	
Doug Law (UCNW/PML)	

Sunday 24th: Scientific Party traveled from Plymouth and Southampton. Late afternoon and early evening the scientific equipment was loaded on board and set up for the following day (1600-2000).

Monday 25th: Downstream survey

The party mustered at 0800 and the *Sea Vigil* locked out of Hull Marina at 0930. The downstream survey started at station 17 (0945) and continued seawards to station 28 (1150). The survey then went out of the estuary into the plume region and included stations VP1, VP2, VP3, VP4 and VP5. The survey continued to station 30 (1352) and ended at station 17 (1633). The survey measured nutrients (TON, 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, VP4 and VP5 for later incubation experiments. The *Sea Vigil* locked into the marina at 1715 and was along side at 1745.

Tuesday 26th: Upstream survey

The party mustered on board at 0415 and *Sea Vigil* departed Hull Marina at 0510. The upstream survey commenced at station 16 (0536) and continued to station 40 (0846) and returned downstream and ended at Goole Rail Bridge, station 5 (1052). Stations sampled 16-1, 38-40, 40-38, 1-5. The nutrient and standard parameter survey was as on Monday. Discrete samples were taken at all stations for gravimetric, C/N and chlorophyll. Large volume samples were collected at stations 16, 12, 8, 4 and 1 for later incubation experiments. The *Sea Vigil* tied up along side in Goole Docks at 1125, samples and U of Southampton equipment was unloaded. At 1200 the scientific party had left the vessel. In the early evening equipment required for the work on Wednesday was loaded and commissioned.

Wednesday 27th: Organic Micropollutant Survey

The scientific party was on board at 0625 and the *Sea Vigil* departed Goole Docks at 0700. The first station, Swinefleet, was sampled at 0737. A total of 8 stations were sampled

in the Ouse, Trent and upper Humber. The vessel passed Hull at 1300 and proceeded downstream to Spurn Head. The organic micropollutants work continued at 1545 as the vessel returned upstream. Further stations in lower Humber completed the survey. Samples of water, sediments and suspended particles were collected for later determination of organic micropollutants. Samples were collected for DOC as part of the seasonal survey work. The surface waters were monitored using the NRAs system to record the standard variables. The *Sea Vigil* locked into the Marina at 1850 and was made fast at 1905. After unloading the party departed the vessel at 1915.

Thursday 28th: Tidal cycle work, Selby (Bank House Reach)

The *Sea Vigil* departed Hull Marina at 0640 and made passage upstream to Selby. The site chosen was the middle of three barges moored at the riverside adjacent to Banks House Farm (opposite bank to BOCM Pauls Jetty, Selby). An EMP2000 was deployed remotely from the *Sea Vigil* and the vessel was fast against the barge at 1020. The scientific party boarded at this time.

The Instruments were deployed at 1030 profiling was undertaken until 2400. The measurements made were conductivity, temperature, turbidity and depth with concomitant recordings of current velocities. Particle size was determined *in situ*. Discrete samples were collected for gravimetric analysis. The surface waters were monitored using the NRAs system. The scientific party departed at 0045.

Friday 29th: (continued) Tidal cycle work, Selby (Bank House Reach)

The *Sea Vigil* departed the study area at 1010 for the journey downstream to Hull Marina. On arrival in the Hull area (1855) the vessel went alongside at Admiral Steps. The *Sea Vigil* entered Hull Marina at 1915. The *Sea Vigil* was tied up along side the wall at 1930 and after unloading all scientific equipment and samples the party departed the vessel around 2015. The vessel was fast at the pontoon at 2025.

Notes:

This was the twentyfirst LOIS RACS(C) Core Programme survey of the Humber and Ouse. The week included the sixth collection of samples for determination of production parameters. This work was carried out over the full length of the survey area. The fifth of a series of seasonal surveys investigating the distribution of organic micropollutants was carried out. Due to inclement weather on Wednesday the survey was not completed as stations at the mouth of the Humber could not be visited.