



**LOIS RACS(C) Core Programme
Sea Vigil SV 20
Cruise Report
24th-28th April 1995**

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Monday 24th: Due to inclement weather the scientific programme had to be canceled as work at the mouth of the Humber was not possible. From 1230 to 1530 *Sea Vigil* made passage from Grimsby Fish Dock to Hull Marina. Between 1600 and 1930 equipment was loaded and commissioned for the following days work.

Tuesday 25th: Scientific party was on board at 0530 and the *Sea Vigil* locked out of Hull Marina at 0610. The downstream survey started at station 16 (0705) and continued seawards to station 30 (1117) and finished at station 17 at 1402. Discrete samples were taken at all stations for gravimetric, C/N and chlorophyll analysis. In addition samples were collected for phytoplankton enumeration and identification. Due to problems with the autoanalyser the nutrient survey consisted of discrete samples collected at the core stations (18, 20, 22, 24, 26, 28, 32, 34, and 36). These will be analysed at the U of Southampton. Large volume samples were collected at stations 24, 26, 28, 29, 32, and 34 for later incubation experiments. As a result of the weather the programme was altered to that above as it was not possible to work in the Humber plume region.

Wednesday 26th: The party mustered on board at 0230 and *Sea Vigil* departed Hull Marina at 0315. The upstream survey commenced at station 16 (0348) and continued to station 40 (0720) and returned downstream and ended at station 16 (1059). Stations sampled 16-1, 38-40, 40-38, 1-16. Due to problems with the autoanalyser the nutrient survey consisted of discrete samples collected at the core stations. These will be analysed at PML. Discrete samples were taken at all stations for gravimetric, C/N, chlorophyll and DOC analysis. The *Sea Vigil* tied up along side Admiral steps at 1115, PML equipment was unloaded. At 1400 the vessel locked into Hull Marina and was along side at 1430. Between 1430 and 1530 the U of Southampton equipment was unloaded. Between 1530 and 1700 loading and commission of equipment required the following day was undertaken.

Thursday 27th: The scientific party was on board at 0300 and the *Sea Vigil* departed Hull Marina at 0335. The first station, Swinefleet, was sampled at 0539. A total of 8 stations were sampled in the Ouse, Trent and upper Humber. Samples of water, sediments and suspended particles were collected for later determination of organic micropollutants.

At 1050 the remaining scientists were collected at Admiral steps. From station 17 (1105) to station 29 (1332) samples were collected for gravimetric, C/N, chlorophyll and DOC analysis. The stations visited were 17, 18, 19, 20, 21, 23, 24, 25, 26, 29.

The organic micropollutants work was continued at 1328 as the vessel proceeded upstream. A further 5 stations in lower Humber completed the survey (1610).

The *Sea Vigil* locked into the Marina at 1630 and was made fast at 1645. After unloading the party departed the vessel at 1730.

Friday 28th: Contingency day

Notes: This was the sixteenth LOIS RACS(C) week on the *Sea Vigil*. To keep the degree of flexibility, required to provide a day with suitable weather for CASI the programme was changed almost daily throughout the week. Thus the cooperation and flexibility of Peter Sarjeant and Tim Rhodes (NRA) and the scientific contingent is acknowledged.

During the week the work was expanded from previous months and included for the first time a DOC survey over full length of the estuary from Selby to Spurn Head. This was completed over two days. The first of a series of monthly measurement of production parameters was undertaken. The third in a series of seasonal surveys looking at organic micropollutant distribution was completed.

The nutrient survey consisted this month of discrete samples, collected at virtually all stations, as problems precluded use of the autoanalyser. Also due to the adverse weather conditions at the mouth of the estuary samples for the incubation experiments (production parameters) were collected westwards of the original plans.

On the down side, due to inclement weather work on the Flux curtain had to be canceled on Monday and it was not possible to incorporate this work into the programme later in the week. As a result of factors beyond the control of LOIS the CASI work did not take place. The cloudy weather forecast led to a maintenance programme being initiated on the instrument.

Duncan Plummer

24th May 1995