



LOIS RACS(C) Core Programme
Sea Vigil SV 24
Cruise Report
21st-25th August 1995

Personnel:

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Monday 21st: The scientific party traveled to Hull and between 1630 and 1930 equipment was loaded on board the vessel and commissioned for the work on Tuesday and Wednesday. A short meeting with respect to the proposed CASI work was held and it was decided to go upstream on Tuesday and downstream on Wednesday. The weather forecast was for good weather on both days.

Tuesday 22nd: The party mustered on board at 0930 and continued to commission the equipment, particularly the nutrient analyser. The *Sea Vigil* departed Hull Marina at 1425. Just off Hull Marina a profile of optical properties was conducted as part of the CASI programme. The instrument deployed measured up and downwelling light. A second profile was conducted at 1455. The upstream survey had commenced at station 16 (Hull at 1446) and continued to station 1 (Derwent Confluence 1545) and returned downstream and ended at station 16 (2107). Stations sampled 16-1, 1-16.

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 16, 14, 12, 8, 4 and 1 for later incubation experiments.

The *Sea Vigil* was along side at Admiral Steps at 2100.

Wednesday 23rd: The party mustered at 0600 and the *Sea Vigil* locked out of Hull Marina at 0715. The downstream survey started at station 17 (0724) and continued seawards to station 28 (0927). The survey then went out of the estuary into the plume region and included stations VP1-VP10. From 0724 to 1436 the UOR was deployed and profiles to determine optical properties were carried out at the VP stations (VP1-6). The survey continued to station 30 (1320) and ended at station 17 (1529). Stations sampled 17-28, VP1-VP10, 30-37, 19-17.

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Between 1600 and 2000 equipment (and samples) from the work on Tuesday and Wednesday was unloaded and that required on Thursday and Friday loaded and commissioned.

Thursday 24th: The *Sea Vigil* departed Hull Marina and made passage upstream to Selby. The vessel passed through the bridges at Selby at 0720. At 1730 the depths alongside three barges were measured prior to selection of the mooring site. 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* at 0740 and the vessel was fast against the barge at 0750. The remainder of the scientific party boarded at 0755.

The Instruments were deployed at 0830 profiling was undertaken until 2130. 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.

Friday 25th: After turning to at 0700 the EMP2000 was recovered at 0740 and the *Sea Vigil* departed the study area at 0750 for the journey downstream to Hull Marina. On arrival in the Hull area (1200) inclement weather meant that the vessel was unable to go alongside at Admiral Steps. As a result the vessel sheltered until 1600 when it entered Hull Marina. The *Sea Vigil* was tied up along side the wall at 1620 and after unloading all scientific equipment and samples the party departed the vessel around 1700.

Notes:

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

The surveys of nutrient species and standard parameters was conducted along the estuary from the Derwent Confluence to beyond Spurn Head. The upstream survey finished at Derwent (not Selby) due to tidal constraints.

The week included the fifth collection of samples for determination of production parameters. This work was conducted over the full length of the survey area.

A full programme of CASI work was carried out throughout the week. Calibration and supporting measurements were made from *Sea Vigil* on Tuesday and Wednesday.

The work measuring heat, salt, suspended matter and current over a tidal cycle was carried out at Selby. This complements work at differing locations over the last few months.

Following the multiplying requests for copies of the standard parameter information on disk over recent months only one copy will now be supplied by the NRA. This disk will be sent to Plymouth with the related printout and requests for copies should be addressed to PML.