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R. V. TELLINA

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Report for Cruise 1/68

Staff

J. Henry
J. Wooltorton

Duration

2-5 January

Aims

1. To test Rhodamine B sampling equipment, including that for sampling from various depths.

2. To make several small Rhodamine B releases in the vicinity of the existing Lowestoft sewer outfall, and at the position of the proposed new outfall.

3. To measure currents at the northern end of the inner Newcome Sand.

4. To take salinity samples at various depths along the lines sampled during the surveys carried out in Summer 1967.

Narrative

TELLINA sailed from Lowestoft at 0900 hours, 2 January. Trials of the Rhodamine sampling equipment were made in the South Roads. Measurements were made with a Turner fluorometer of the 'background' due to suspended matter in the water. Thick fog, which reduced visibility to 50 yards, prevented the continuation of these measurements and TELLINA docked at 1445 hours.

TELLINA sailed at 0915 hours, 3 January. Further tests were made of the modified depth sampling system and the surface sampling system was calibrated. Two small releases of Rhodamine B were made off the end of the sewer outfall. The first release was made on the flood tide and followed for 1½ hours. The second release, made on the ebb tide, had been followed for 1½ hours when poor visibility forced a return to Lowestoft at 1500 hours.

A third dye release was made from the sewer outfall at 1000 hours, 4 January. The Rhodamine from this release was followed on the flood tide for 3¼ hours. TELLINA docked at 1400 hours.

A moderate ground swell prevented the planned current measurements being made on 5 January. Instead the current shear across the inner channel of the South Roads was investigated using surface floats. TELLINA docked at 1330 hours.

Results

Aim 1: The surface sampling system was tested, proved satisfactory and then calibrated. The depth sampling equipment proved unsatisfactory and will need further equipment.

Aim 2: Three Rhodamine releases were made at the position of the existing outfall. The releases confirmed the feasibility of measuring low dye concentrations in turbid inshore waters. The movement of the dye corresponded closely to the pattern indicated by salinity measurements made last Summer.

Aim 3: No current measurements were made at the north end of the inner Newcome Sand. Instead the current shear across the inner South Roads channel was investigated using surface floats. The current velocity at the centre of the channel was found to be some 20 per cent higher than at the edges.

Aim 4: No salinity samples were taken.

J. Henry
8/1/68

Initialled: A.J.L.

Seen in draft: W.B.

Distribution: basic list, plus the following:-

J. Henry
J. Wooltorton