Indexed AIR

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

1986 RESEARCH VESSEL PROGRAMME

REPORT: RV CIROLANA: CRUISE 6A

(PROVISIONAL: NOT TO BE QUOTED WITHOUT PRIOR REFERENCE TO THE AUTHOR)

STAFF

P A Gurbutt
B J Harvey
A R Folkard
D S Kirkwood
N D Pearson
K J Medler
J Wooltorton
J M Rees
P Blowers

DURATION

Left Lowestoft 0545h 18 June
Arrived Falmouth 0715h 30 June

LOCALITY

North East Atlantic

AIMS

1. To work a network of CTD and rosette array stations for the collection of water samples for tritium determination, centred on the NEA dumpsite.

2. To work three stations for plutonium determination. At one of these sites additional water will be collected to enable a K_d determination to be made.

3. To take XBT and surface seawater samples (on passage) for caesium determination.

NARRATIVE

RV CIROLANA sailed from Lowestoft and proceeded to the first tritium station at 46°00'N 11°00'W (TTO 115), collecting surface water samples for caesium determination on passage down the English Channel and across the Celtic Sea. On route, the afterdeck and laboratories were decontaminated in preparation for the sampling.

Tritium stations were then worked around the southern, western and dumpsite part of the network, along with two plutonium stations and one K_d station on the Iberian Abyssal Plain.

XBTs were fired at six hourly intervals after the second tritium station and the results telexed ashore daily.

The cruise was prematurely terminated when the ship made for Falmouth at full speed after the death of Mr J Larter. RV CIROLANA docked in Falmouth on 30 June.

RESULTS

1. 11 of the 16 tritium stations planned for the first part of the cruise (including 3 on the NEA dumpsite) were successfully completed. In addition to water for tritium determination, samples were taken for the determination of oxygen, salinity, nitrate, phosphate and silicate to help elucidate the possible sources of the water containing tritium. Also, on each station a Niskin was closed high in the water column to provide extra calibration data for the CTD.

2. At two stations 300 l of water was collected at 5m above the seabed for plutonium determination and at one of these a further 3 casts were made to provide enough suspended matter for a K_d determination to be made. Surface water samples (200 l each for Cs and Pu/Am) were also collected at the same locations.

3. The CTD logging software written for the Apricot microcomputer and the elastic buffer worked well. A user-guide was prepared during the cruise.

4. The tritium stations have provided good quality temperature and salinity profiles from a wide range of locations in the Northeast Atlantic.

5. Surface water samples were collected in the Channel and Celtic Sea for caesium determination.

6. Almost all the chemical analyses which could be done at sea were completed before the ship docked in Falmouth.

P A Gurbutt
(Scientist-in-Charge)
30 June 1986

SEEN IN DRAFT M J Willcock Master
E W Pearson Fishing Skipper

INITIALLED: H W H

Basic List+
P A Gurbutt
B J Harvey
A R Folkard
D S Kirkwood
N D Pearson
K J Medler
J Wooltorton
J Rees
P Blowers