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FRV *Clupea*

Cruise 10/90

REPORT

10CP90

10-19 September 1990

Personnel

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Objectives

1. Collection of water, particulate and sediment samples for determination of trace organic contamination at selected sites in the Firths of Tay and Forth and in the Moray Firth.
2. Collection of sediment and demersal fish for determination of organic contaminants at designated intermediate and offshore North Sea Task Force (NSTF) locations.
3. Collection of sediment and demersal fish near to Piper Alpha.
4. Collection of water samples around Piper Alpha area for mercury analysis.
5. Collection of caesium samples for radio-monitoring.

Narrative

The scientific staff joined *Clupea* on the morning of 10 September. The favourable weather forecast led to a revision of the cruise programme and the cruise began with the survey and NSTF work in the Piper Alpha area.

Monday 10 September - The vessel left Buckie at 1300 on-route to Piper Alpha. Water samples for mercury analyses were collected at two hourly intervals.

Tuesday 11 September - Following arrival (0000 hr), the vessel began collecting grab sediment samples at 16 stations on transects SW-NE and SE-NW of the Piper Alpha debris. After completion of this work (0700), the vessel proceeded to NSTF station 3 (58°15'N 00°30'E) and began collecting samples of water, particulate, sediment and demersal fish (one hour trawl). The vessel returned to berth in Aberdeen (2145).

Wednesday 12 September - The vessel left Aberdeen (0600) on route to NSTF 6 (56°30'N 00°30'E) arriving at 1000. Following collection of samples of water, particulate, sediment

and demersal fish, the vessel proceeded to NSTF 5 (56°30'N 01°30'W) where a similar group of samples were collected. Following completion of the work (2000) the vessel proceeded to an anchorage in St Andrew's Bay (2330).

Thursday 13 September - The vessel left St Andrew's Bay (0500) and steamed to the first of six stations in the Firth of Forth (see Table 1). Samples of water, particulate and sediment were collected at each station. Following completion of the work (1900) the vessel proceeded to Granton where it berthed.

Friday 14 September - The vessel left Granton (0700) on route to Grangemouth docks arriving at 0900. The vessel was secured to the outer pier and samples of water and particulate collected over a period of 13 hours. The work was completed at 2130 and the vessel proceeded to an anchorage near Granton.

Saturday 15 September - Water and particulate sampling commenced at 0545 and continued for a period of 13 hours. The vessel berthed in Granton overnight.

Sunday 16 September - The vessel left Granton at 0900 (low tide prevented departure any earlier) and proceeded to an anchor site (56°27.50'N 02°45.75'W) in the Firth of Tay. Water and particulate sampling commenced at 1330 and continued for a period of 12 hours.

Monday 17 September - The vessel left anchor (0700) and proceeded to an anchor station in close proximity to the Tay Road Bridge (56°27.20'N 02°56.10'E). Water and particulate sampling began at 0800 and continued for a period of 13 hours. After completion of the sampling (2100) the vessel left anchor and proceeded to the Moray Firth.

Tuesday 18 September - Water samples for mercury analysis were collected at two hourly intervals from 0700. The vessel arrived at NSTF 4 (58°00'N 03°00'W) at 1130 and samples of water and sediment were collected. The worsening weather conditions prevented collection of demersal fish at this site. The vessel then proceeded to Buckie collecting water samples for caesium analyses on the way. The vessel docked in Buckie at 1400. It was estimated that 10 hours of the cruise were lost to the inclement weather.

Wednesday 19 September - The poor weather conditions prevented the unloading/loading of the vessel. This was eventually achieved on the following day.

## Results

Samples of water, particulates and sediment were collected from the estuaries of the Forth and Tay. Analysis for trace organic contaminants will begin as soon as possible.

Samples of water, particulates, sediment and demersal fish (cod, whiting and dab) were collected at four NSTF stations. Analysis for trace organic and inorganic contaminants will begin as soon as possible. These samples will fulfill the NSTF requirements for 1990.

J N Robson  
25 September 1990

**TABLE 1**

**Location of sampling stations (water, particulates and sediment) in the Firth of Forth**

Station	Latitude	Longitude
1	56°12.00'N	02°40.00'W
2	56°08.50'N	02°40.00'W
3	56°04.80'N	02°40.00'W
4	56°09.80'N	03°00.00'W
5	56°04.80'N	03°00.00'W
6	56°00.00'N	03°00.00'W