

R1/12

Not to be cited without prior reference to the Marine Laboratory, Aberdeen

FRV *Scotia*

Cruise 0596S

REPORT

2-8 April 1996

Ports

Loading: Aberdeen
 Unloading: Aberdeen

Personnel

A McIntosh	HSO (in charge)
D Moore	SSO
E Dalgarno	ASO (FSL Torry)
C Robinson	Visitor
C McKenzie	Visitor
A Vale (Ms)	Visitor
L Bullough	Visitor - Aberdeen University
J Christie (Ms)	Visitor - Aberdeen University

Fishing Gear: Granton 48' trawl (BT 101) (or "monk" trawl) with tickler chains.

Objectives

1. To investigate *Braer* oil spill effects of hydrocarbon loadings in sediments and histopathology in fish.
2. To locate and sample a single well drilling site.

Out-turn days per project: 6 days BIH1, 1 day BIG1

Narrative

After all gear and equipment had been loaded and secured, *Scotia* departed from Aberdeen at 1030 hours on 2 April and made passage north to the first sampling site. After a problem with the trawl winches had been rectified, and the trawl warps streamed and tightened onto the winch drums, *Scotia* arrived at the first trawling site. Sediment samples were obtained at the start, mid and end points of the trawl track to provide an integrated hydrocarbon concentration estimate of the substrate from where the fish were sampled. Between 0230 hours on 3 April and 0700 hours on 4 April, nine stations were occupied and provided sediment samples taken by Craib corer, which were divided into 2 cm sections for total hydrocarbon concentrations and a further core sample for redox potential measurements. Three further trawl stations were occupied before arriving at the West Burra sediment

sampling site. Between 2130 hours on 3 April and 0930 hours on 4 April nine stations were occupied and provided sediment samples taken by Craib corer as above. A further trawl station was occupied off Vaila after which worsening weather precluded further sampling in this area. Slow passage was made north and a trawl was possible in the Unst area on the morning of 5 April. Between 2300 hours on 5 April and 0330 on 6 April, sediments were obtained by corer at a site off the eastern Shetland mainland for comparison with sediment sampled off the west coast. A further trawl was taken south of Sumburgh to provide for live fish to be returned to Aberdeen. Passage was made south to the Fladen Ground where sediment sampling resumed at 1930 hours on 6 April and completed by 0830 hours on 7 April. A 45 minute trawl was taken in the Moray Firth to provide a sample of live dogfish for return to Aberdeen. *Scotia* then made passage to the single well drilling site sampled in detail last year, and repeat sampling was carried out at selected stations between 1300 and 1930 hours. The sampling programme was concluded by 2000 hours on 7 April, when *Scotia* made passage south to Aberdeen, docking at 0500 hours. Personnel were disembarked by 0900 hours on 8 April.

Results

All sediment and fish samples taken were treated according to standard protocols. Analyses will be carried out in the Marine Laboratory and elsewhere and the results presented in due course. The sample of live dogfish was successfully returned to the aquarium in Aberdeen, but the holding facilities aboard *Scotia* were insufficient to prevent a significant number of the dab from dying before they could be transferred to the aquarium facilities in Aberdeen.

A McIntosh
15 July 1996

Seen in draft: J Nichols, Master

Trawl and Sediment Sampling Sites - April 1996

