

Library

R1/6

12CR79

IN CONFIDENCE

HJT

NOT TO BE QUOTED WITHOUT REFERENCE TO LABORATORY

FRV 'CLUPEA'

CRUISE 12/79

REPORT:

15-19 October 1979

OBJECTIVE:

To undertake monitoring surveys at Bell Rock and St Abbs sewage sludge dumping grounds the locations of which are shown on the attached chart.

NARRATIVE:

Clupea sailed from Buckie at 1800hrs on 15 October for the Bell Rock sludge dumping ground where work was commenced on arrival. Biological sampling continued over the two dumping grounds until 1230hrs on 17 October when a rendezvous was established with the Lothians Region dumping vessel 'Gardyloo'. Sampling and mapping of the sewage sludge slick was then undertaken, before the biological survey resumed. Work continued until approximately midnight on 18 October.

RESULTS:

Twenty-three stations were sampled for macrobenthos, meiobenthos, heavy metal content, sediment particle size, carbon content and organic pesticide residues. Table 1 shows the levels of heavy metals found. The epibenthos was assessed at ten stations by underwater television and at six by Agassiz trawl. Colour photographs were taken along the transects surveyed by TV camera. The movement of the slick was monitored over 2 hours.

Derek C Moore
3.4.80

Seen in draft
A Mair

TABLE 1

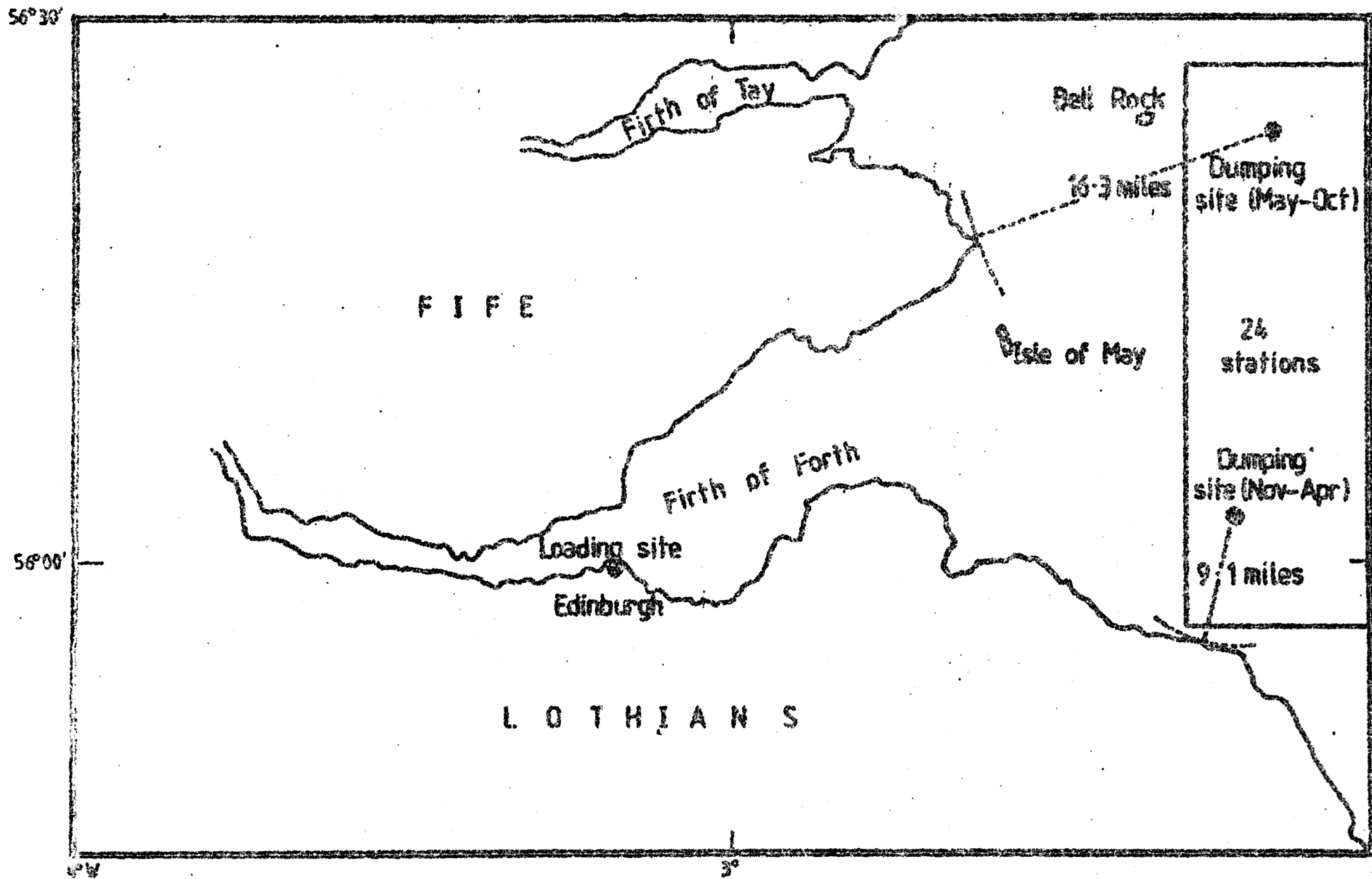
HEAVY METAL LEVELS - OCTOBER 1979 (p.p.m.)

St Abb's Head

<u>Stn</u>	<u>Cd</u>	<u>Pb</u>	<u>Cu</u>	<u>Zn</u>	<u>Hg</u>
1	< 0.03	8.0	2.16	17.9	< 0.02
3	< 0.03	6.9	2.10	17.8	0.03
13	< 0.03	8.5	3.06	22.7	0.02
23	< 0.03	9.4	3.15	24.9	< 0.02
25	< 0.03	11.1	3.22	25.3	< 0.02
17	< 0.03	6.4	1.11	17.7	< 0.02
15	< 0.03	9.8	3.11	24.0	0.02
11	< 0.03	10.7	3.30	26.2	0.02
9	< 0.03	8.5	2.90	24.2	0.02

Bell Rock

1	< 0.05	13.5	2.05	27.5	0.02
2	< 0.05	14.4	2.21	23.5	< 0.02
3	< 0.05	11.3	2.23	25.3	0.02
6	< 0.05	13.0	2.34	29.0	0.02
13	< 0.03	7.8	2.19	28.7	< 0.02
20	< 0.03	8.8	1.66	28.0	< 0.02
23	< 0.03	10.9	1.83	30.4	0.03
24	< 0.03	8.8	1.72	24.8	0.02
25	< 0.03	11.2	1.62	27.6	< 0.02
17	< 0.03	8.8	1.74	23.8	0.02
16	< 0.03	5.4	1.77	22.2	0.02
15	< 0.03	8.1	2.44	24.8	0.02
11	< 0.03	17.2	1.73	30.1	< 0.02
9	< 0.03	17.4	1.83	30.6	0.02



ERV. Clupea 15—19th October 1979