DEPARTMENT FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS.
CEFAS LOWESTOFT LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND.

2006 RESEARCH VESSEL, PROGRAMME

PROGRAMME: RV ENDEAVOUR; CRUISE 13/06

STAFF:

Part A	**Part B**
J Thain (SIC)	John Thain (SIC)
J Jones	J Jones
S Lincoln	S Lincoln
B Lyons (Weymouth)	W Reynolds
P Roberts	A Raffo
P Bersuder	P Roberts
M Stacey	F Goodsir (Lowestoft)
F Goodsir (Lowestoft)	E Clarke
S Feist (Weymouth)	R Hicks (Weymouth)
G Stentiford (Weymouth)	K Bateman (Weymouth)
J Bignall (Weymouth)	J Bignall (Weymouth)
N Tyslind (Student – Weymouth)	N Tyslind (Student – Weymouth)
1 at Vibracorer - Alluvial	
2 at Vibracorer - Alluvial	

All staff from Burnham laboratory unless indicated otherwise.

DURATION: 19th June – 10th July

LOCATION: Irish Sea, Clyde, North Sea and English Channel.

AIMS:

1. To collect samples of demersal fish for chemical analysis from the Irish Sea, North Sea and Eastern English Channel in support of the Clean Seas Environmental Monitoring Programme (CSEMP) formerly theUK National Marine Monitoring Programme (UK NMMP~~CSEMP~~).

2. To collect fish samples at CSEMP sites for fish disease and genotoxic markers (e.g. DNA adducts).

3. To collect fish samples at CSEMP sites for biochemical markers (e.g. EROD and bile metabolites analysis).

4. To sample representative CSEMP stations using grab, multicore and beam trawl for trace metal contaminants, sediment particle size analysis, PAHs and benthic fauna.

5. To trial the proposed redesign of the CSEMP in two offshore regions. Sediment samples will be collected using a day grab for benthos, trace metals, organics and chlorophyll. Water samples will be collected for nutrients and chlorophyll.

6. To collect biota where appropriate for the determination of imposex in support of OSPAR requirements.

7. To collect fish samples from CSEMPCSEMP and other targeted sites and, specifically, from sites on the South Coast for potential inclusion on the list of targeted CSEMP species. Biomarker measures from current reference sites (Rye Bay, Cardigan Bay) can then be used to assess suitability of species for inclusion in the CSEMP suite of biomarker techniques.

8. Approximately sixteen deep (~2-3 m) sediment cores will be collected in the Irish Sea using a Vibrocorer operated by staff working for a specialist subcontractor (Alluvial Mining). This is part of a project (C2170) being carried out for the Food Standards Agency (FSA).

PLAN: Scientific staff will arrive at the ship on the evening of Sunday 18th June. An induction course will be conducted on the morning of the 19th June. RV *Endeavour* will sail from Swansea on the midday tide on the 19th June and sail to Carmarthen Bay to take samples under aims 1, 2, 3 and 7. RV *Endeavour* will then sail to Cardigan Bay where samples will be taken at the CSEMP stations under aims 1,2,3 and 4. Further sampling sampling will take place at CSEMP stations at Red Wharf Bay, Liverpool Bay (including trend samples), Morecambe Bay, SE Isle of Man and Dundrum Bay under aims 1, 2, 3, 4 and 7. Sampling using the Vibrocorer (aim 8) will take place after RV *Endeavour* completes its work in Cardigan Bay and it is envisaged that this work will take place at night. After completing the sampling of stations in the Irish Sea the ship will then steam south where RV *Endeavour* will then take samples at stations along the south coast under aims 1, 2 3 and 7. *Endeavour* will then steam north to sample CSEMP stations at Rye Bay, Thames Warp and Gabbard under aims 1, 2, 3 and 7. Further North CSEMP stations on the East coast, Central North Sea and Dogger Bank under aims 1,2 and 3 will be sampled. RV *Endeavour* will sail to Lowestoft to dock on the 10th July.

A list of CSEMP stations for the sampling of fish is given in Appendix 1 below.

Change of scientists to take place at Weymouth; the Vibrocorer will also be off-loaded at Weymouth.

GEAR:

1. 2x Agasis trawls + spare nets
2. 2x Simon Jennings type 2m Beam Trawl + spare nets
3. 2x Burnham 2m Beam Trawl + 2 spare nets and beams
4. 2x 3m beam trawls with cod end liners and spare nets
5. Granton trawl with cod end liner + spare trawl and net

6. Fish hopper and sorting/processing tables
7. Reineck corer and ancillary equipment
8. Rock dredge with chain link bag
9. 2x Day Grabs (+ a length of rope between warp and grab to avoid contamination)
10. 2x sets of Scallop Dredges with beam and spares.
11. Portable fridge and chest freezer
12. Hand held CTD
13. 2x 1.5 kg balances
14. 1x 5kg balance
15. 1x 10kg balance

All other gear from the Burnham Laboratory

John Thain (Scientist in Charge) 19th May 2006

INITIALLED: Draft seen by AE002 contract leader

DISTRIBUTION:
Basic list: +

STAFF:
J Thain (SIC)
J Jones
W Reynolds
B Lyons
G Stentiford
S Feist
K Bateman
P Roberts
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F Goodsir
R Hicks
E Clarke
A Franklin
P Bersuder
A Raffo
M Stacey
N Tyslind

APPENDIX 1: CSEMP FISHING STATIONS

CSEMP Number	Location	Mid tow Lat. Long.
244	Amble	55 16.01 N 01 15.26 W
243	Farne	55 29.71 N 01 07.59 W
283	North East Dogger	55 18.05 N 02 53.82 E
284	North Dogger	55 04.08 N 02 05.40 E
286	West Dogger	54 46.76 N 01 17.69 E
287	Central Dogger	54 30.00 N 02 42.53 E
294	Tees Bay	54 45.25 N 01 08.31 W
344	Off Flamborough	54 14.72 N 00 29.91 E
346	Off Humber	54 03.92 N 01 47.46 E
377	Humber	53 19.37 N 00 25.47 E
378	Indefatigable Bank	53 33.40 N 02 04.92 E
387	Wash	53 08.50 N 01 33.30 E
475	Outer Gabbard	52 01.86 N 02 06.57 E
486	Rye Bay	50 46.74 N 00 46.83 E
New	Off Newhaven	50 45.59 N 00 00.00 E
New	Lyme Bay	50 36.86 N 02 55.82 W
New	Off Eddystone	50 06.44 N 04 06.06 W
New	West Lundy	51 09.79 N 05 26.67 W
605	Celtic Deep	51 10.29 N 05 43.75 W
616	Camarthen Bay	51 32.82 N 04 35.13 W
649	North Cardigan Bay	52 42.44 N 04 32.29 W
654	South Cardigan Bay	52 10.90 N 04 29.87 W
656	Inner Cardigan Bay	52 18.00 N 04 16.35 W
665	Outer Cardigan Bay	52 23.76 N 04 53.72 W
706	Burbo Bight	53 28.24 N 03 20.47 W
715	Liverpool Bay	53 28.32 N 03 41.91 W
769	St Bees Head	54 30.71 N 03 47.63 W
776	Red Wharf Bay	53 22.46 N 04 12.84 W
796	Morecambe Bay	53 55.31 N 03 23.23 W
805	SE Isle of Man	54 03.36 N 03 52.47 W
815	Outer Dundrum Bay	54 04.81 N 05 37.29 W
Trend	Smith's Knoll	52 48.67 N 02 45.33 E
Trend	Alternative Smith' Knoll	52 43.91 N 02 27.51 E
Trend	Smith's Knoll Bank	52 46.48 N 02 17.25 E
Trend	Liverpool Bay	53 23.76 N 03 37.55 W