

Clients

Norwegian Department of Fisheries
and
The State Pollution Control Authority

Norwegian 1990 Sediment Data



for the North Sea Task Force (NSTF)
and the Joint Monitoring Group (JMG)

A Joint Report

NIVA 

Norwegian Institute for Water Research
and



Institute of Marine Research

NIVA and IMR - JOINT REPORT

Norwegian Institute for Water Research



NIVA

P.O.Box 173, Kjellsås
N-0411 Oslo
Norway

Phone : (47) 22 18 51 00
Telefax: (47) 22 18 52 00

Institute of Marine Research



IMR

P.O.Box 1870
N-5024 Bergen-Nordnes
Norway

Phone : (47) 55 23 85 00
Telefax: (47) 55 23 85 31

NIVA project no.:	Report no.:
80106	3110

IMR project no.:	Report no.:
11.011	1-1994

Report Title: Norwegian 1990 sediment data for the North Sea Task Force (NSTF) and the Joint Monitoring Group (JMG).	Date: 25.8.94. Printed: NIVA 1994
Author(s): Norman W. Green (NIVA) Jarle Klungsoyr (IMR)	Topic group: Marine contaminants
	Geographical area: North Sea Area
	Pages: Edition:

Clients: Norwegian Department of Fisheries Norwegian State Pollution Control Authority	Client ref.:
---	---------------------

Abstract:

The report is a compilation of data used in the Norwegian contribution to the North Sea Task Force Monitoring Plan and the Joint Monitoring Programme monitoring of contaminants (mainly: selected metals, organochlorines, polycyclic aromatic hydrocarbons) in sea bed sediment collected 1990. The samples were collected by gravity cores and grab/box samplers in the North Sea, Skagerrak and Kattgat region. The raw data and the mean and standard deviations of parallel samples (if relevant) is presented.

4 keywords, Norwegian

1. Miljøgifter
2. Sediment
3. Metaller
4. Organiske miljøgifter

4 keywords, English

1. Contaminants
2. Sediment
3. Metals
4. Organic contaminants

Project managers

Norman W. Green

Jarle Klungsoyr

NIVA

IMR

ISBN-82-577-2585-4

For the Administration

Torgeir Bakke

Harald Loeng

**NORWEGIAN 1990
SEDIMENT DATA**

**FOR
THE NORTH SEA
TASK FORCE (NSTF)
and
THE JOINT MONITORING
GROUP (JMG)**

A joint report from

**THE INSTITUTE OF MARINE RESEARCH (IMR)
and
THE NORWEGIAN INSTITUTE FOR WATER RESEARCH (NIVA)**

Oslo, 20. May 1994

Project managers: Norman W. Green (NIVA)
 Jarle Klungsøyr (IMR)

FOREWORD

This data report presents the Norwegian contribution to the 1990 sediment investigations for the North Sea Task Force Monitoring Master Plan (NSTF-MMP) and the Joint Monitoring Programme (JMP). JMP is organized by the Joint Monitoring Group (JMG) under the Oslo and Paris Commissions (OSPARCOM). JMP and NSTF-MMP was carried out in close cooperations with the International Council for the Exploration of the Sea (ICES).

The Norwegian 1990 investigations on sediments for the NSTF-MMP and the JMP were carried out by Institute of Marine Research (IMR referred to herein as ICES code IMRN) and Norwegian Institute for Water Research (NIVA). The investigations were funded by the Department of Fisheries and by the Norwegian State Pollution Control Authority.

It is with appreciation that the following are recognized for their contribution to this report:

NIVA

- Collection of samples: Unni Efriamsen, Frank Kjellberg and Roger Konieczny*
- Metal analyses: Marit Villø and her colleagues*
- Data entry: Marit Mjelde and Tone Jøran Oredalen*
- Programming: Audun Rønningen and Gunnar Severinsen*

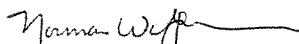
IMRN

- Collection of samples: Kjell Westrheim and Svein Wilhelmsen*
- Organic analyses: Kjell Westrheim and Svein Wilhelmsen*

Other institutes

- Sediment age determinations: Anders Jensen (FORCE institutes, DK)*
- Arsenic analyses: Kåre Helge Karstensen (SINTEF-SI, Oslo)*

Oslo, 20. May 1994


Norman W. Green
Project co-manager

Contents

1. Background and aims	4
2. Sampling.....	4
3. Variables.....	7
4. Analytical laboratories	11
5. Analyses code descriptions	12
6. Quality assurance	15
7. Comment on detection limit	16
8. Explanation of Tables A and B	16
9. References	17
Appendix Table A - Sediment 1990, raw data	
Appendix Table B - Sediment 1990, parallel mean and standard deviation	

1. Background and aims

The 1990 sediment data was compiled as part of the Norwegian contribution to the North Sea Task Force Monitoring Master Plan (NSTF-MMP) and the Joint Monitoring Programme (JMP).

The JMP is ordered under the Oslo and Paris Commissions (OSPARCOM). OSPARCOM was established in the seventies with the aim to protect the marine environment against anthropogenic contamination. The Oslo commission focuses on problems relating to dumping at sea in the northeast Atlantic and Baltic areas. The Paris commission focuses on discharges from land based sources. Together, the commissions (Oslo-Paris commissions - OSPARCOM), govern the "Joint Monitoring Group" (JMG), under the auspices of the "International Council for the Exploration of the Sea" (ICES). Norway and other European countries, which are members of OSPARCOM have the following aims outlined in the "Joint Monitoring Program" (JMP):

- 1) Assess the state of contamination,
- 2) Indicate possible remedial action.

The NSTF was established in 1989 by the countries bordering the North Sea. The NSTF aim was to (NSTF, 1990):

To carry out work leading, in a reasonable time-scale, to a dependable and comprehensive statement of circulation patterns, inputs and dispersion of contaminants, ecological conditions and effects of human activities in the North Sea.."

2. Sampling

The JMG/NSTF sediment stations monitored in 1990 by Norway are spread over the Kattegat, Skagerrak, North Sea south to the Dogger Bank and the Faroe Islands (Fig.1 and 2).

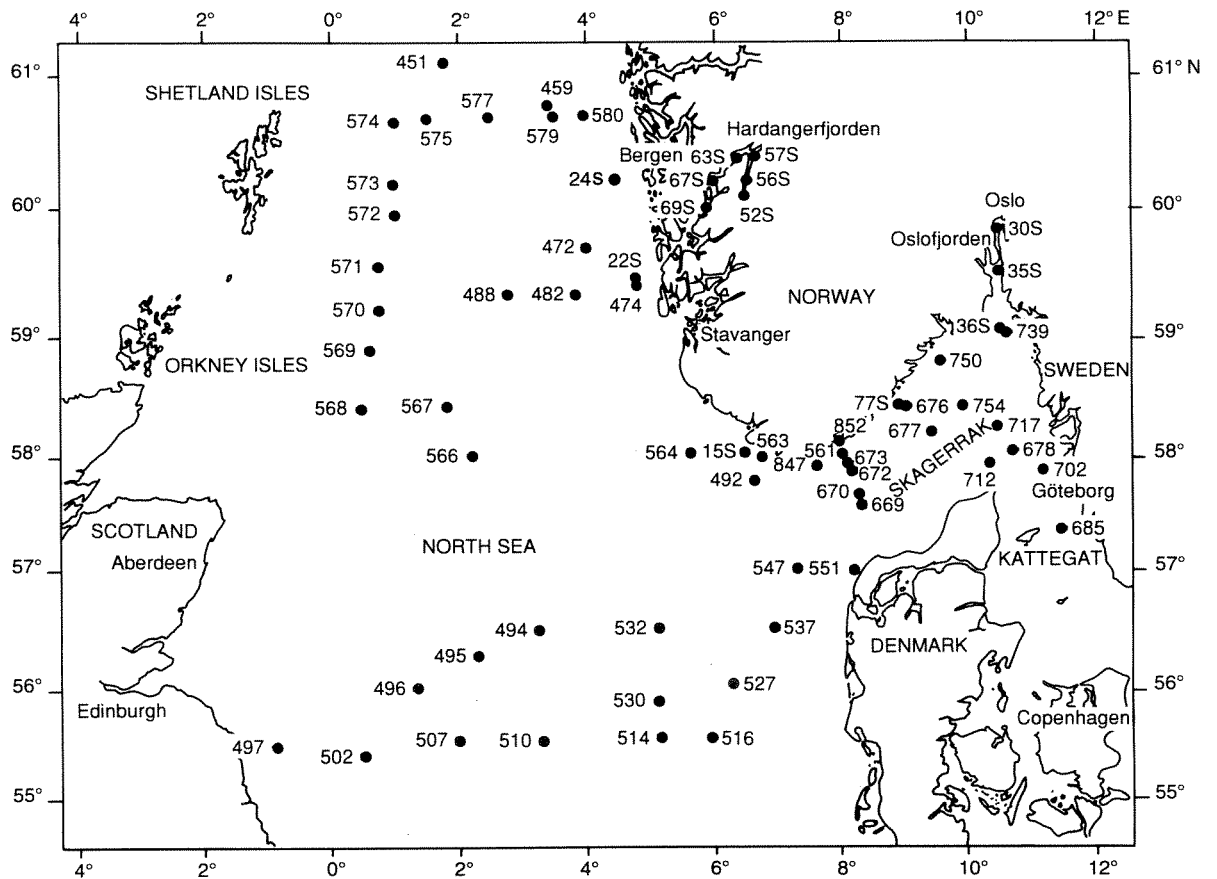


Figure 1. Norwegian JMG/NSTF sediment stations in the North Sea, Skagerrak and Kattegat region 1990. Stations labeled 15S-69S were sampled by NIVA and stations labeled 451-847 by IMRN.

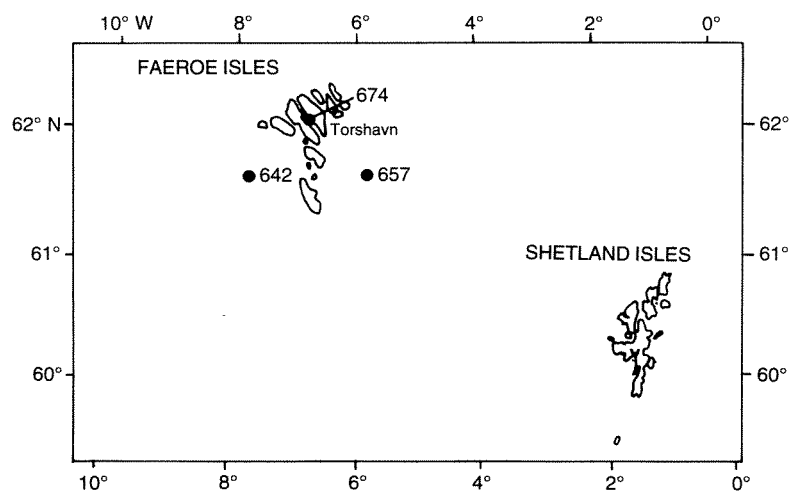


Figure 2. Norwegian JMG/NSTF sediment stations in the Faroe Island region 1990. Stations were sampled by IMRN.

An overview of JMP/NSTF methods employed is given by Green (1993) from which variable abbreviations and brief descriptions of analytical methods used in this report are derived. Extracts from the report are given below.

The sampling is in accordance with the guidelines for sediment stipulated by the JMP (OSPARCOM, 1990) and the NSTF-MMP (NSTF, 1989). NIVA employed a Niemstö (1974) gravity corer with an inner diameter of 50 mm during the cruises of "Sirafjord" in May and November. The samples were stored frozen. Comments about the appearance of the cores were noted but are not given in the tables of this report.

IMRN sediment samples were collected during the 1990 April-May cruises of the research vessels G.O.Sars, Eldjarn and H. Mosby. Three replicate samples were collected from each station using a 30x30 cm boxcorer. A Van Veen grab was used on some stations with coarse sandy sediments where the box corer did not sample properly. Separate 10x10 cm slices of sediment surface (0-1cm) were collected from each corer/grab for analysis of sediment characteristics (TOC, grain size), trace metals and organic contaminants. The samples were stored frozen.

3. Variables

JMG and NSTF list of mandatory and suggested determinands for sediment is given by ICES (1992). Table 1 (from Green, 1993) includes a list of variable abbreviations (ICES codes) and their respective definitions used in Table A and B.

Abbreviation	English	Norwegian
ELEMENTS		
Al	aluminium	<i>aluminium</i>
As	arsenic	<i>arsenikk</i>
Cd	cadmium	<i>kadmium</i>
Co	cobalt	<i>kobolt</i>
Cr	chromium	<i>krom</i>
Cu	copper	<i>kobber</i>
Fe	iron	<i>jern</i>
Hg	mercury	<i>kvikksølv</i>
Li	lithium	<i>litium</i>
Mn	manganese	<i>mangan</i>
Ni	nickel	<i>nikkel</i>
Pb	lead	<i>bly</i>
Pb210	lead-210	<i>bly-210</i>
Se	selenium	<i>selen</i>
Ti	titanium	<i>titan</i>
Zn	zinc	<i>sink</i>
PAHs		
PAH	polycyclic aromatic hydrocarbons	<i>polysykliske aromatiske hydrokarboner</i>
ACNE	acenaphthene	<i>acenaften</i>
ACNLE	acenaphthylene	<i>acenaftylen</i>
ANT	anthracene	<i>antracene</i>
BAA	benz(a)anthracene	<i>benz(a)antracene</i>
BAP	benzo(a)pyrene	<i>benzo(a)pyren</i>
BBF	benzo(b)fluoranthene	<i>benzo(b)fluoranten</i>
BBKF	benzo(b+k)fluoranthene	<i>benzo(b+k)fluoranten</i>
BEP	benzo(e)pyrene	<i>benzo(e)pyren</i>
BGHIP	benzo(ghi)perylene	<i>benzo(ghi)perylen</i>
BIPN	biphenyl	<i>bifenyl</i>
BJKF	benzo(j,k)fluoranthene	<i>benzo(j,k)fluoranten</i>
CHR	chrysene	<i>chrysen</i>
COR	coronene	<i>coronen</i>
DBAHA	dibenz(a,,h)anthracene	<i>dibenz(a,,h)antracene</i>
DBA3A	dibenz(a,c/a,h)anthracene	<i>dibenz(a,c/a,h)antracene</i>
DBP	dibenzopyrener	<i>dibenzopyren</i>
DBT	dibenzothiophene	<i>dibenzothiofen</i>

Abbreviations (cont'd.)

Abbreviation	English	Norwegian
DBTC1	C ₁ -dibenzothiophenes	C ₁ -dibenzotiofen
DBTC2	C ₂ -dibenzothiophenes	C ₂ -dibenzotiofen
DBTC3	C ₃ -dibenzothiophenes	C ₃ -dibenzotiofen
FLE	fluorene	fluoren
FLU	fluoranthene	fluoranten
ICDP	indeno(1,2,3-cd)pyrene	indeno(1,2,3-cd)pyren
NAPTM	2,3,5-trimethylnaphthalene	2,3,5-trimetylnaftalen
NAP	naphthalene	naftalen
NAP1M	1-methylnaphthalene	1-metylnaftalen
NAP2M	2-methylnaphthalene	2-metylnaftalen
NAPC1	C ₁ -naphthalenes	C ₁ -naftalener
NAPC2	C ₂ -naphthalenes	C ₂ -naftalener
NAPC3	C ₃ -naphthalenes	C ₃ -naftalener
NAPDI	2,6-dimethylnaphthalene	2,6-dimetylnaftalen
PA	phenanthrene	fenantren
PAC1	C ₁ -phenanthrenes	C ₁ -fenantrener
PAC2	C ₂ -phenanthrenes	C ₂ -fenantrener
PAM1	1-methylphenanthrene	1-metylfenantren
PER	perylene	perylen
PYR	pyrene	pyren
DI-Σ _n	sum of "n" dicyclic "PAH"s	sum "n" disykliske "PAH"
P-Σ _n	sum "n" PAH	sum "n" PAH
PK-Σ _n	sum carcinogen PAH's	sum kreftfremkallende PAH
PAHΣΣ	DI-Σ _n + P-Σ _n etc.	DI-Σ _n + P-Σ _n mm..
SPA _H	= PAHΣΣ	= PAHΣ Σ
PCBs		
PCB	polychlorinated biphenyls	polyklorerte bifenyler
CB	individual chlorobiphenyls (CB)	enkelte klorobifenyl
CB28	CB28 (IUPAC)	CB28 (IUPAC)
CB31	CB31 (IUPAC)	CB31 (IUPAC)
CB44	CB44 (IUPAC)	CB44 (IUPAC)
CB52	CB52 (IUPAC)	CB52 (IUPAC)
CB95	CB95 (IUPAC)	CB95 (IUPAC)
CB101	CB101 (IUPAC)	CB101 (IUPAC)
CB105	CB105 (IUPAC)	CB105 (IUPAC)
CB110	CB110 (IUPAC)	CB110 (IUPAC)
CB118	CB118 (IUPAC)	CB118 (IUPAC)
CB128	CB128 (IUPAC)	CB128 (IUPAC)
CB138	CB138 (IUPAC)	CB138 (IUPAC)

Abbreviations (cont'd.)

Abbreviation	English	Norwegian
PCBs (cont.)		
CB149	CB149 (IUPAC)	<i>CB149 (IUPAC)</i>
CB153	CB153 (IUPAC)	<i>CB153 (IUPAC)</i>
CB156	CB156 (IUPAC)	<i>CB156 (IUPAC)</i>
CB170	CB170 (IUPAC)	<i>CB170 (IUPAC)</i>
CB180	CB180 (IUPAC)	<i>CB180 (IUPAC)</i>
CB194	CB194 (IUPAC)	<i>CB194 (IUPAC)</i>
CB209	CB209 (IUPAC)	<i>CB209 (IUPAC)</i>
CB-Σ7	CB: 28+52+101+118+138+153+180	<i>CB: 28+52+101+118+138+153+180</i>
CB-Σn	sum of CBs, n = number of compounds	<i>sum CBer, n = antall forbindelser</i>
ALD	aldrin	<i>aldrin</i>
DIELD	dieldrin	<i>dieldrin</i>
ENDA	endrin	<i>endrin</i>
CCDAN	cis-chlordane	<i>cis-chlordane</i>
ACDAN	α-chlordane	<i>α -chlordan</i>
GCDAN	γ-chlordane	<i>γ -chlordan</i>
OCDAN	oxy-chlordane	<i>oxy-chlordane</i>
TNONC	trans-nonachlor	<i>trans-nonaklor</i>
TCDAN	trans-chlordane	<i>trans-chlordane</i>
OCS	octachlorostyrene	<i>octaklorstyren</i>
QCB	pentachlorobenzene	<i>pentaklorbenzen</i>
DDD	dichlorodipenyldichloroethane 1,1-dichloro-2,2-bis- (4-chlorophenyl)ethane	<i>diklordifenyldikloretan</i> <i>1,1,1-trikloro-2,2-bis-(4-klorofenyl)etan</i>
DDE	dichlorodiphenylethylene (principle metabolite of DDT) 1,1-dichloro-2,2-bis- (4-chlorophenyl)ethylene*	<i>diklordifenyletylen</i> <i>(hovedmetabolitt av DDT)</i> <i>1,1-dikloro-2,2-bis-</i> <i>(4-klorofenyl)etylen</i>
DDT	dichlorodiphenyltrichloroethane 1,1,1-trichloro-2,2-bis- (4-chlorophenyl)ethane	<i>diklordifenyiltrikloretan</i> <i>1,1,1-trikloro-2,2-bis-(4-klorofenyl)etan</i>
DDEOP	o,p'-DDE	<i>o,p'-DDE</i>
DDEPP	p,p'-DDE	<i>p,p'-DDE</i>
DDTOP	o,p'-DDT	<i>o,p'-DDT</i>
DDTPP	p,p'-DDT	<i>p,p'-DDT</i>
TDEOP	o,p'-DDD	<i>o,p'-DDD</i>
TDEPP	p,p'-DDD	<i>p,p'-DDD</i>

Abbreviations (cont'd.)

Abbreviation	English	Norwegian
PCBs (cont.)		
DDTEP	p,p'-DDE + p,p'-DDT	<i>p,p'-DDE + p,p'-DDT</i>
DD-nΣ	sum of DDT and metabolites, n = number of compounds	<i>sum DDT og metaboliter, n = antall forbindelser</i>
HCB	hexachlorobenzene	<i>heksaklorbenzen</i>
HCHG	lindane γ HCH = gamma hexachlorocyclohexane (γ BHC = gamma benzenhexachloride, outdated synonym)	<i>lindan</i> <i>γ HCH = gamma heksaklorsyκλοheksan</i> <i>(γ BHC = gamma benzenheksaklorid,</i> <i>foreldret navn)</i>
HCHA	α HCH = alpha HCH	<i>α HCH = alpha HCH</i>
HCHB	β HCH = beta HCH	<i>β HCH = beta HCH</i>
HC-nΣ	sum of HCHs, n = count	<i>sum av HCHs, n = antall</i>
EOCI	extractable organically bound chlorine	<i>ekstraherbart organisk bundet klor</i>
EPOCI	extractable persistent organically bound chlorine	<i>ekstraherbart persistent organisk bundet klor</i>
NTOT	total organic nitrogen	<i>total organisk nitrogen</i>
CORG	organic carbon	<i>organisk karbon</i>
GSAMT	grain size	<i>kornfordeling</i>
MOCON	moisture content	<i>vanninnhold</i>

4. Analytical laboratories

Three analytical laboratories were involved in the 1990 sediment survey: (ICES laboratory codes are listed.)

INSTITUTES

FORC	FORCE Institutes, Div. for Isotope Technique and Analysis [DK]	<i>FORCE Institutterne, Div. for Isotopteknik og Analyse [DK]</i>
IMRN	Institute of Marine Research (IMR)	<i>Havforskningsinstituttet</i>
NIVA	Norwegian Institute for Water Research	<i>Norsk institutt for vannforskning</i>
SIIF	Fondation for Scientific and Industrial Research at the Norwegian Institute of Technology - SINTEF-SI (previously: Center for Industrial Research SI)	<i>Stiftelsen for industriell og teknisk forskning ved Norges tekniske høyskole-SINTEF-SI (tidligere: Senter for industriforskning)</i>

5. Analyses code descriptions

Brief descriptions of the analytical methods employed for JMP and NSTF-MMP have been coded and compiled (Green, 1993). With the exception of arsenic, those relevant to the 1990 sediment survey are listed below. Arsenic determinations were done by SIIF(1993) using atomic absorption using hydride technique on an aliquot from NIVA HF extract (cf., code 351)

The following descriptions (excerpts from Green 1993) focus on the principles involved and hence are not intended as detailed specifications. The descriptions may vary arbitrarily in detail and are coupled to period analysis for the 1990 sample and hence, may not necessarily reflect methods currently practiced by the contributing institutes. Note also that the descriptions do not necessarily list which specific compounds of PAH's and PCB's are determined. These can be derived from table A.

code *description*

350 **Mercury in sea bed sediment (NIVA)**

Drying procedure

An accurately weighed sample of approximately 1g is dried at 105°C for one hour. The sample is cooled in a desiccator for one hour before weighing. Normally, determinations are on wet samples and the water content is determined of a subsample.

Extraction (oxidation)

Approximately 1g of the sample is accurately weighed in pyrex flasks, 20ml 7N (concentrated) nitric acid (suprapur) is added and the solution heated 120°C for 30min in an autoclave. The solution is transferred to a 100ml volumetric flask and diluted to the mark with deionized water.

Determination

A maximum of 100ml sample used, diluted if Hg >50ng/l; P-E 1100 B with gold trap used, helium replaced air as carrier gas and lowest signal was 2.5ng/l.

351 **Chromium, copper, iron, manganese, nikkel and zinc in sea bed sediment (NIVA)**

Same procedure as 350: #1, Drying.

Extraction (oxidation)

'Total' extraction (HFO): Approximately 0.1g of the sample is accurately weighed in, 2ml of hydroflouric acid and 2+2ml of concentrated nitric acid ('aqua regia') is added and the solution heated in a microwave oven. The solution is transferred to a 100ml volumetric flask and diluted to the mark with deionized water.

Determination

Determinations by **flame atomic absorption spectrometry** using acetylene/air flame. Instrument: *Prior to 1986* a Perkin Elmer model 2380 was used and *since 1986* the P-E

560 has been used. For determinations of low concentrations (below detection limits) the flameless method (352) is used. The following are elements often analyzed by flame and their respective detection limits of extract solution:

Element	µg/l
Al aluminium	1000
Cr chromium	50
Cu copper	100
Fe iron	200
Li lithium	10
Mn manganese	50
Ni nickel	100
Zn zinc	10

352 Aluminium, cadmium, chromium, cobalt, copper, iron, lead, lithium, manganese, nickel, and zinc in seabed sediment (NIVA)

Same procedure as 350: #1, Drying.

Extraction (oxidation)

'Total' extraction (HFO): Approximately 0.1g of the sample is accurately weighed in, 2ml of hydroflouric acid and 2+2ml of concentrated nitric acid (suprapur) is added and the solution heated in a microwave oven. The solution is transferred to a 100ml volumetric clask and diluted to the marked with deionized water.

Determination

Concentrations are determined by **graphite furnace atomic absorption** electrothermal spectrometry or GFAAS using a hollow cathode lamp (HCL) or an electrodeless discharge lamp (EDL) as a light source. *Prior to 1986* a Perkin-Elmer model 560 with HGA-500 graphite furnace was used and *since 1986* the P-E 2380 has been used instead of the P-E 560.

A 20µl portion of extract, treated with HNO₃, is injected into graphite tube. The sample is then heated electrothermally in a stepwise manner through drying, ashing and atomization by a programme designed for each element. The programe which controls the ramp time, holding time and temperature for each phase is often adjusted to achieve optimal results.

The elements analyzed and approximated limit of detection for the extract are:

Element		µg/l
Al	aluminium	5
Cd	cadmium	0.1
Co	cobalt	5
Cr	chromium	0.5
Cu	copper	0.5
Fe	iron	5
Li	lithium	10
Mn	manganese	0.5
Ni	nickel	5
Pb	lead	0.5
Zn	zinc	10

650 Pb-210 dating (FORC)

reference: Pheiffer Madsen, P., Sørensen, J., 1979. Validation of the Lead-210 dating method. Journal of Radioanalysis and Chemistry 54:39-48.

Excerpt (Larsen, B., & Jensen, A., 1989. Marine Pollution Bulletin 20(11):556-560.): "The determination of time- dependent sediment parameters is based on the vertical distribution of the natural radioactive isotope lead-210 [= ²¹⁰ Pb] ... The content of unsupported lead-210, that lead-210 not produced in the sediment) decreases regularly downwards in undisturbed and steadily deposited sediment owing to radioactive decay. Departures from this predictable lead-210 profile in the topmost sediment column permit an assessment of mixing and/or intermittent erosion."

Dried slices of sediment are employed.

760 PCB in sea bed sediment (IMRN)

PCB in total sediment (50g) were extracted by acetone and hexane:Acetone (3:1) using repeated ultrasonication and agitation (Jensen et al., 1977).

Sulphur was removed with metallic mercury.

A florisil column (100-230 mesh, 30 cm x 6 mm ID) was used for the separation of the extract into 3 fractions. The first fraction eluted with 2 ml pentane was discarded; the second fraction eluted with 6.5 ml pentane contained PCB, HCB, aldrin, o,p-DDE, p,p-DDE and o,p-DDT; and the third fraction eluted with 10ml pentane:acetone (9:1) contained, alpha-HCH, beta-HCH, gamma-HCH (Lindane), o,p-DDD, p,p-DDD, o,p-DDT (20%) and p,p-DDT.

The third fraction needed further clean up on a neutral alumina column (30 cm x 6 mm ID; deactivated with 6% water). The chlorinated pesticides were eluted with 18 ml pentane. Beta-HCH was not eluted using this method.

A few samples (1990 sediment stations 15S-67S) were cleaned up before separation on the florisil column. A short silica column (10 cm x 6 mm ID) was used, followed by a

alumina column (10 cm x 6 mm ID, acidic Al₂O₃). Pentane:dichloromethane (4:1) was used for elution of the compounds.

The chlorinated compounds were quantified on GC (ECD) using two different columns: SE-54 CB, fused silica, 50 m x 0.20 mm, 0.11 µm; SP-2330, fused silica, 60 m x 0.25 mm, 0.20 µm.

Reference: Jensen, S., Renberg, L., Reutergårdh, L., 1977. Residue analysis of sediment and sewage sludge for organochlorines in the presence of elemental sulfur. Anal. Chem. 49:316-318.

769 PAH in sea bed sediment (IMRN)

Ca.50 g of total sediment (< 2mm) were extracted three times with acetone and hexane:acetone (3:1) using ultrasonication and agitation.

The clean-up of the extract was carried out on a short silica column (10 cm x 6 mm ID) using pentane:dichloromethane (9:1) as eluent. GC/MS equipped with a SE-54 fused silica capillary column (50 m x 0.20 mm ID, 0.11 µm film thickness) was used for the analysis of 2-6 ring aromatic hydrocarbons.

390 Total organic nitrogen and organic carbon (CORG) in sea bed sediment (NIVA)

5-8mg of freeze dried sample is weighed in a tin-foiled capsule and heated to over 1800 °C in an oven. The carbon in the gas is analyzed in a C-N 1106 Carlo-Erba element analyzer. Detection limit for C is 1 µg/mg and N is 1 µg/mg.

6. Quality assurance

Two reference materials are used for the routine control of metal analyses in sediment; BCSS - 1 marine sediment homogenate NBS 1645 river sediment. Either one aliquot per batch were used or one for every 12-15 samples when the number of samples is greater than 15.

The certified reference material HS-4 from NRCC was used to test the accuracy and precision in the analysis of PAHs in marine sediments

7E - ICES, First Intercalibration Exercise on Trace metals in Marine Sediments - 1984 - (1/TM/MS).

8B - ICES/OSPARCOM, First Intercomparison Exercise on Organochlorines (individual chlorobiphenyl congeners) in Marine Sediments - Phase 1, analysis of standard solutions - 1989 - (1/OC/MS:1).

7. Comment on detection limit

The detection limits are approximations based on 3 times the standard deviation of the 'blank' or near zero concentration of a solution. Day-to-day variations in the analytical instrument may lead to minor variation in detection limits.

8. Explanation of Tables A and B

Table A presents the raw data from the 1990 sediment investigation. Table B presents the count, mean and standard deviation for parallel samples, if relevant. All data is on a **dry weight** basis. Three units of measure are used: **ppt** (parts per thousand), **ppm** (parts per million) and **ppb** (parts per billion). The numeric values shown have been printed with a fixed number of digits and do not necessarily indicate analytical precision.

The table headings are mostly self explanatory but some need clarifying.

Sample area	refers to the official JMP/NSTF designation and for the most part this is undefined.
Locality	station name and position; where position is a 6 digit number, eg. 58° 9.24' would be designated 580924.
Type	refers to sample method: where GC = gravity corer (used by NIVA) and GS = box corer or grab sampler (used by IMRN).
Diameter	refer to the inner diameter (mm) of GC or subsampling device for GS.

The abbreviations for analytical laboratory, analysis code, detection limit and variable name have been explained in the preceding sections

The order of stations in tables are as follows (see also Fig.1 and 2):

NIVA stations: 30S, 35S, 36S, 77S, 15S, 24S, 22S, 52S, 56S, 57S, 63S, 67S, 69S

IMRN stations 451 to 847: ordered by latitude from north to south and secondarily from west to east.

9. References

- Green, N.W., 1993. Joint Monitoring Programme - JMP. Overview of analytical methods employed by JMP in Norway 1981-1991. Norwegian Institute for Water Research. Project O-80106 report number 41 pp..
- ICES, 1992. ICES Environmental Data Reporting Formats. International Council for the Exploraion of the Sea. January 1992.
- JMG, 1985. Tenth meeting of the Joint Monitoirng Group. Oslo 22-25 January 1985. Summary record JMG 10/14/1-E, 24 pp. plus appendices.
- NSTF, 1990. North Sea Task Force Monitoring Master Plan. North Sea Task Force, Oslo and Paris Commissions, International Council for the Exploration of the Sea. North Sea Environment. Report no. 3, 37 pp..
- SIIF, 1991. 43-91-091 Bestemmelse av arsen i 130 prøveløsninger. Fondation for Scientific and Industrial Research at the Norwegian Institute of Technology - SINTEF-SI (previously: Senter for Industrial Research SI). Project 113307-023, 3pp..
- OSPARCOM, 1990. Oslo and Paris Commissions - Princibles and Methodology of the Joint Monitoring Programme. OSPARCOM - March 1990.

TABLE A

Sediment 1990

Raw data

REPORT INFORMATION : " S E D I M E N T " .

```

----- : -----
Table-File-Name      : I:\TBX\JMG\SED\TAB-0SED.TB1
Limit-CheckFile     : )LIM\NO-LIMIT.SED
Weight basis        : "DRY.weight".
Table SORT-Mode     : 1. LOCALITY-index
                     1.1: Sampling Lab = NIVA
                        (Predefined sequence)
                     1.2: OTHER Sampling Labs
                        (Position North:South,
                        and West:East)
                     : 2. Sample DATE.
                     : 3. Tables may be separated into
                        to "variable-groupes" tested
                        as: Subno = 0 and Subno > 0
----- : -----

```

NOTES :

- ☞ The detection limits given here are approximations based on 3 times the standard deviation of the "blank" or near zero concentration of a solution.
Day to day variations in the analytical instrument may lead to different detection limits.
- ☞ Method codes are explained in: Green,N.W.,1993. Overview of Analytical Methods Employed by JMP in Norway 1981-92. NIVA project 80106.
- ☞ NB ! The numeric values shown have been printed with a FIXED number of digits, and do not necessarily indicate analytical precision.
- ☞ For "Σ" variables (e.g. CB_Σ7, DD_ΣΣ) , all the "<"-values (less than the detection limits) are counted only once. If two or more different "<"-values are present, the maximum of the least questionable (suspect) "<"-value is used. Any missing "Σ"-elements are ignored.
- ☞ Footnotes consist of 4 parts:

 - 1: a letter code (e.g ? or s)
The letter code may include one or more characters indicating possible matching letters referenced before or after numbers.
 - 2: a count (in paranthesis)
 - 3: a "!" or ">"
"! " refer to notes BEFORE numeric values.
>" refer to notes AFTER numeric values.
 - 4: The footnote explanation.

Sample area: **J99 Undefined**. All concentrations on **Dry weight basis**.
 Locality : **77S Arendal area**, Latitude: 58°24.20N, Longitude: 09°01.80E
 Sample date: **900510**, Sampling Lab: NIVA, Type: GC, Diameter: 050
 Est. sedimentation rate 005 mm/year. Unfractionated sample unless "u" then <63µm.

Seq. no.	Water depth m	Core depth cm	Sub slice no	Detection Limit	Analytical Lab.	NIVA										FORC	
						MOCON %<63µ	CORG ppt	Al ppt	Li ppt	Cd ppm	Cu ppm	Hg ppm	Pb ppm	Zn ppt	NIVA 353		NIVA 351	NIVA 350	NIVA 353	NIVA 351	NIVA 350
0771	350	53	01	0	2	98.70		21.20	47.800	66.500	0.100	22.40	0.10	55.00	0.120		
0772	360	39	01	0	1	99.39		21.60	49.600	69.000	0.110	23.30	0.10	55.00	0.130		
			02	1	2	99.40		22.10	51.500		0.090	24.80	0.11	33.90	0.120		
			03	2	4	99.09		22.00	46.100		0.070	23.80	0.14	32.90	0.120		
			04	4	6	99.21		22.80	43.400		0.050	23.50	0.07	34.60	0.120		
			05	6	10	99.71		22.50	45.000		0.070	26.30	0.08	40.00	0.130		
			06	10	15	99.58		22.30	54.300		0.060	24.40	0.07	42.50	0.150		
			07	15	20	99.71		21.40	48.200		0.080	24.80	0.07	42.70	0.150		
0773	346	44	01	0	1			21.40	43.700	65.000	0.100	22.50	0.12	55.00	0.120		
			02	1	2			22.30	45.400		0.070	23.10	0.10	32.10	0.130		
			03	2	4			22.00	47.100		0.080	22.60	0.10	32.80	0.130		
			04	4	6			21.80	54.700		0.060	22.60	0.08	32.60	0.130		
			05	6	10			22.10	58.800		0.040	22.50	0.06	36.30	0.130		
			06	10	15			21.70	54.600		0.050	23.00	0.08	34.50	0.130		
			07	15	20			21.20	46.800		0.070	25.50	0.08	35.40	0.140		
0774	356	48	01	0	2		69.36								98.17	miss	
			02	2	4		65.39									99.00	miss
			03	4	6		66.61										miss
			04	6	8		65.15										123.83
			05	8	10		62.72										miss
			06	10	12		61.51										miss
			07	12	14		59.53										miss
			08	14	16		59.43										miss
			09	16	18		59.68										103.67
			10	18	20		59.66										miss
			11	20	22		59.25										92.67
			12	22	24		59.78										miss
			13	24	26		60.39										miss
			14	26	28		60.24										69.00
			15	28	30		59.84										miss
			16	30	32		60.12										miss
			17	32	34		60.55										36.83
			18	34	36		59.88										miss
			19	36	38		58.88										miss
			20	38	40		57.77										19.00
			21	40	42		58.34										miss
			22	42	44		57.97										miss
			23	44	46		58.15										20.50
			24	46	48		57.31										miss
			25	48	50		58.57										miss
			26	50	51		58.34										1.50

miss(16) ! Missing value.

Sample.area: J99 Undefined. All concentrations on Dry-weight basis.
 Locality : 15S Lista area. Latitude: 58°01.00N, Longitude: 06°34.30E
 Sample date: 900507, Sampling Lab: NIVA, Type: GC, Diameter: 050
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless ^{mm} then <63µm.

Seq. no.	Water depth m	Core depth cm	Sub slice no	Slice depth cm	Depth no upper	Depth no lower	NIVA		NIVA		NIVA		NIVA		NIVA		NIVA		NIVA		FORC	
							MOON %	MOON %	AL ppt	AL ppt	Li ppm	Li ppm	Cd ppm	Cd ppm	Cu ppm	Cu ppm	Hg ppm	Hg ppm	Pb ppm	Pb ppm	Zn ppt	Zn ppt	mbq/g	mbq/g	650 ?	650 ?
0151	383	23	01	0	1		88.95	18.40	53.400	62.000	0.110	20.20	0.05	62.50	0.110							
			02	1	2		78.92	17.20	67.100	0.040	0.040	22.00	0.03	48.80	0.110							
			03	2	4		99.51	14.30	49.800	0.070	0.070	17.50	0.03	50.50	0.100							
			04	4	6		86.02	14.20	63.800	0.090	0.090	19.00	0.03	42.90	0.100							
			05	6	10		86.71	12.80	60.700	0.060	0.060	22.80	0.02	31.90	0.090							
			06	10	15		88.84	12.20	49.800	0.060	0.060	19.70	0.02	30.10	0.090							
			07	15	20		89.80	9.50	72.800	0.080	0.080	21.20	0.02	21.20	0.090							
0152	383	37	01	0	1			16.00	57.100	61.500	0.080	23.10	0.03	55.00	0.110							
			02	1	2			18.10	64.300	0.040	0.040	22.10	0.04	43.20	0.120							
			03	2	4			18.10	53.500	0.060	0.060	22.60	0.03	53.00	0.130							
			04	4	6			16.40	57.000	0.050	0.050	21.00	0.04	47.60	0.120							
			05	6	10			14.70	61.300	0.060	0.060	21.20	0.03	35.80	0.100							
			06	10	15			13.60	60.200	0.070	0.070	17.90	0.02	25.60	0.090							
			07	15	20			13.40	62.600	0.070	0.070	17.80	0.02	25.70	0.090							
0154	383	34	01	0	2			73.10													158.17	
			02	2	4			59.64													130.67	
			03	4	6			55.57													64.53	
			04	6	8			51.54													miss	
			05	8	10			51.68													0.33	
			06	10	12			53.90													2.00	
			07	12	14			48.23													miss	
			08	14	16			55.26													-2.83	
			09	16	18			48.97													miss	
			10	18	20			51.69													-0.67	
			11	20	22			50.42													miss	
			12	22	24			51.08													14.67	
			13	24	26			50.08													miss	
			14	26	28			43.14													-0.33	
			15	28	30			41.52													miss	
			16	30	32			40.56													-1.33	

miss(6) ! Missing value.

Sample.area: J99 Undefined. All concentrations on Dry-weight basis.
 Locality : 15S Lista area. Latitude: 58°01.00N, Longitude: 06°34.30E
 Sample date: 900507, Sampling Lab: NIVA, Type: GC, Diameter: 050
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless ^{mm} then <63µm.

Seq. no.	Water depth m	Core depth cm	Sub slice no	Slice depth cm	Depth no upper	Depth no lower	IMRN		IMRN		IMRN		IMRN		IMRN		IMRN		IMRN		IMRN		Σ(*)								
							CB31 ppt	CB52 ppt	CB101 ppt	CB105 ppt	CB118 ppt	CB128 ppt	CB138 ppt	CB149 ppt	CB153 ppt	CB170 ppt	CB180 ppt	CB Σ7 ppt	CB ΣΣ ppt	DEOPP ppt	DOOPP ppt	DIOPP ppt	DIOPP ppt	DIOPP ppt	DIOPP ppt	DIOPP ppt	DIOPP ppt	DIOPP ppt	DIOPP ppt	DIOPP ppt	
0155	383	28	00	0	2		0.26	0.15	0.63	2.09	1.11	2.32	1.54	2.50	1.40	1.88	1.88	0.66	0.66	0.33	0.33	0.66	10.34	<14.92	s9.08	s1.90	s9.92	s0.96	s4.27	s0.97	s27.10
0156	383	25	00	0	2		0.25	0.15	0.59	2.81	1.41	3.13	0.77	3.30	1.73	2.21	2.21	0.37	0.37	0.38	0.38	0.72	13.01	17.82	0.58	<0.05	0.65	0.28	0.78	<3.15	

s(13) ! Suspect value(s)

Tab.width cont'd J99, 15S Lista area, 900507.

Analytical Lab.	IMRN	IMRN	Σ(*)	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN									
Analysis Code.	760	760	!	760	760	769	769	769	769	769	769	769	769	769	769	769	769	769	769									
Detection Limit	0.05	0.05	!	0.05	0.05	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0									
Seq. Water Core Sub slice-depth	HCHA	HCHB	HCHG	HC	Σ3	HCB	ALD	NAP	NAPC1	NAPC2	NAPC3	FILE	PA	ANT	DBT	PAC1	DBIC1	FLJ	PYR	PAC2	DBIC2	DBIC3	BAA	CHR				
no. depth	m	cm	no	upper	lower	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm				
0155	383	28	00	0	2	s0.21	s11.50	s6.53	s18.24	s0.58	s0.12	16.00	34.00	137.00	192.00	30.00	71.00	10.00	6.00	86.00	10.00	123.00	102.00	61.00	11.00	12.00	63.00	108.00
0156	383	25	00	0	2	0.09	0.08	0.10	0.27	0.61	0.10	16.00	93.00	208.00	153.00	20.00	97.00	14.00	9.00	159.00	16.00	120.00	99.00	100.00	16.00	16.00	74.00	124.00

Tab.width cont'd J99, 15S Lista area, 900507.

Analytical Lab.	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN									
Analysis Code.	769	769	769	769	769	769	769	769	769	769	769	769	769	769	769	769	769	769									
Detection Limit	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0									
Seq. Water Core Sub slice-depth	BEKF	BEP	BAP	PER	ICDP	DEWA	BCHP	DI	ΣΣ	PA	ΣΣ	PK	ΣΣ	PAHDE	SPAH	PA	ANT	DBT	PAC1	DBIC1	FLJ	PYR	PAC2	DBIC2	DBIC3	BAA	CHR
no. depth	m	cm	no	upper	lower	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm
0155	383	28	00	0	2	273.00	102.00	77.00	28.00	155.00	36.00	124.00	379.00	1488.00	604.00	1867.00	1867.0	6.00	86.00	10.00	123.00	102.00	61.00	11.00	12.00	63.00	108.00
0156	383	25	00	0	2	280.00	109.00	76.00	34.00	138.00	31.00	112.00	470.00	1624.00	599.00	2094.0	2094.0	9.00	159.00	16.00	120.00	99.00	100.00	16.00	16.00	74.00	124.00

Sample area: J99 Undefined. All concentrations on Dry weight basis.

Locality : 24S Sotra, Latitude: 60°15.10N, Longitude: 04°33.30E

Sample date: 900503, Sampling Lab: NIVA, Type: GC, Diameter: 050

Est. sedimentation rate 001 mm/year. Unfractionated sample unless ^{mm} then <63µm.

Analytical Lab.	NIVA	NIVA	NIVA	NIVA	NIVA	NIVA	NIVA	NIVA	NIVA	NIVA	NIVA	NIVA	NIVA	NIVA	NIVA	NIVA	NIVA	NIVA
Analysis Code.	390	352	353	353	351	350	351	350	351	350	351	350	351	350	351	350	351	350
Detection Limit	0.2	0.001	0.001	0.001	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Seq. Water Core Sub Slice-depth	CSZMT	CORG	Al	Li	Cd	Cu	Hg	Pb	Zn	As	Co	Cr	Mn	Ni	Se	Te	V	W
no. depth	m	cm	no	upper	lower	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm
0241	294	16	00	0	2	40.57	9.50	33.900	60.000	0.070	14.10	0.03	40.50	0.060	0.060	0.060	0.060	
0242	294	34	00	0	2	.	8.90	32.100	60.500	0.070	14.40	0.02	36.40	0.060	0.060	0.060	0.060	
0243	294	27	00	0	2	.	8.20	35.600	61.000	0.060	12.30	0.02	38.00	0.050	0.050	0.050	0.050	

Sample.area: J99 Undefined. All concentrations on Dry-weight basis.
 Locality : 571 , Latitude: 59°35.00N, Longitude: 00°42.00E
 Sample date: 900428 , Sampling Lab: IMRN, Type: GS, Diameter: 100
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless ^{mm} then <53µm.

Analytical Lab. :	IMRN	NIVA	NIVA	SIIF	NIVA	NIVA	NIVA	NIVA	NIVA	NIVA	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN
Analysis Code. :	390	352	106	353	351	350	351	353	351	350	760	760	760	760	760	760	760	760	760
Detection Limit :	0.2	0.001	7.0	0.001	0.05	0.01	0.01	0.001	0.05	0.01	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Seq. Water Core Sub Slice-depth	CSAMT	CORG	Al	As	Cd	Cu	Hg	Ni	Pb	Zn	CB28	CB31	CB52	CB101	CB105	CB118	CB128	CB138	CB149
no. depth Lrgt no upper lower	%<53µ	ppt	ppt	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
m cm																			
5711 122 00 0 1	16.00	5.30	26.000	2.8	<0.020	40.70	4.00	0.01	10.20	12.70	0.020	0.01	0.02	0.09	0.03	0.03	0.02	0.13	0.09
5712 122 00 0 1	16.00	5.50	28.100	3.0	0.050	40.40	4.10	0.01	12.40	11.30	0.020	0.02	<0.05	0.02	0.02	0.02	0.05	0.05	0.03

Tab.width cont'd J99 , 571 , 900428 .

Analytical Lab. :	IMRN	Σ(*)	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN
Analysis Code. :	760	!	!	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760
Detection Limit :	0.05	!	!	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Seq. Water Core Sub Slice-depth	CB180	CB 57	CB 57	DBOP	DDEPP	DDTOP	DDTTP	TDEOP	TDEPP	DD 57	HCHA	HCHG	HC 53	ALD	DIELD	END	TNOC	ACAN	GCAN
no. depth Lrgt no upper lower	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
m cm																			
5711 122 00 0 1	0.09	0.49	0.69	0.01	0.06	<0.05	0.04	0.03	0.05	<0.24	0.01	0.06	0.07	<0.05	0.01	<0.05	<0.050	0.020	0.050
5712 122 00 0 1	0.03	<0.23	<0.31	0.01	0.06	0.01	0.05	0.04	0.05	0.22	0.01	0.05	0.06	0.02	0.01	0.02	<0.05	0.020	0.050

Tab.width cont'd J99 , 571 , 900428 .

Analytical Lab. :	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN
Analysis Code. :	769	769	769	769	769	769	769	769	769	769	769	769	769	769	769	769	769	769	769
Detection Limit :	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Seq. Water Core Sub Slice-depth	NAPC2	NAPC3	FILE	PA	ANT	DBT	PAC1	DBIC1	FLU	PYR	PAC2	DBIC2	DBIC3	BAA	CHR	BBKF	BEP	BAP	PER
no. depth Lrgt no upper lower	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
m cm																			
5711 122 00 0 1	7.00	5.00	<1.00	5.00	1.00	<1.00	7.00	<1.00	10.00	6.00	6.00	1.00	1.00	6.00	9.00	54.00	16.00	34.00	4.00
5712 122 00 0 1	6.00	5.00	<1.00	4.00	1.00	<1.00	6.00	<1.00	9.00	5.00	7.00	1.00	1.00	5.00	7.00	53.00	16.00	39.00	4.00

Tab.width cont'd J99 , 571 , 900428 .

Analytical Lab. :	Σ(*)	Σ(*)	Σ(*)	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN
Analysis Code. :	!	!	!	769	769	769	769	769	769	769	769	769	769	769	769	769	769	769	769
Detection Limit :	!	!	!	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Seq. Water Core Sub Slice-depth	PA 57	PK 57	PAHDE	SPAH	PAHDE	SPAH	PAHDE	SPAH	PAHDE	SPAH	PAHDE	SPAH	PAHDE	SPAH	PAHDE	SPAH	PAHDE	SPAH	PAHDE
no. depth Lrgt no upper lower	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
m cm																			
5711 122 00 0 1	<199.00	107.00	<213.00	212.0	<199.00	107.00	<213.00	212.0	<199.00	107.00	<213.00	212.0	<199.00	107.00	<213.00	212.0	<199.00	107.00	<213.00
5712 122 00 0 1	<204.00	110.00	<219.00	218.0	<204.00	110.00	<219.00	218.0	<204.00	110.00	<219.00	218.0	<204.00	110.00	<219.00	218.0	<204.00	110.00	<219.00

Sample area: **J99 Undefined**. All concentrations on **Dry weight basis**.
 Locality : **527** , Latitude: 56°00.00N, Longitude: 06°21.00E
 Sample date: **900423** , Sampling Lab: IMRN, Type: GS, Diameter: 100
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless ^{mm} then <63µm.

Analytical Lab. :	IMRN	NIVA	NIVA	NIVA	NIVA	NIVA	NIVA	NIVA	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN
Analysis Code. :	390	352	106	353	351	350	351	350	760	760	760	760	760	760	760	760	760	760	760	760
Detection Limit :	0.2	0.001	7.0	0.001	0.05	0.01	0.01	0.01	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Seq. Water Core Sub Slice-depth	GSAMT	CORG	Al	As	Cd	Cu	Hg	Ni	Pb	Zn	CB31	CB52	CB101	CB105	CB118	CB128	CB138	CB149	CB153	CB156
no. depth Lrgt no upper lower	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
m cm	41	00	0	1	3.20	<0.01	2.90	3.30	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm	41	00	0	1	5.00	0.01	2.90	3.30	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					11.70	0.020	2.90	3.30	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
cm					16.30	0.020	2.90	3.30	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020

Tab.width cont'd **J99** , **527** , **900423** .

Analytical Lab. :	IMRN	Σ(*)	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN	IMRN
Analysis Code. :	760	!	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760
Detection Limit :	0.05	!	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Seq. Water Core Sub Slice-depth	CB180	CB 57	CB ΣΣ	DBOP	DBEPP	DDIOP	DIIPP	DIOP	DIOPP	DIOPP	DIOPP	DIOPP	DIOPP	DIOPP	DIOPP	DIOPP	DIOPP	DIOPP	DIOPP	DIOPP
no. depth Lrgt no upper lower	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
m cm	41	00	0	1	0.01	0.09	<0.15	<0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm	41	00	0	1	0.04	<0.54	<0.71	0.03	0.13	0.13	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
cm					<0.06	<0.08	<0.48	0.02	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cm					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
cm					<0.05	<0.05	<0.05	<0.05	<0.											

TABLE B

Sediment 1990

parallel mean and standard deviation

REPORT INFORMATION : " S E D I M E N T " .

----- : -----

Table-File-Name : I:\TBX\JMG\SED\TAB-1SED.TB1

Limit-CheckFile :)LIM\NO-LIMIT.SED

Weight basis : "DRY.weight".

Table SORT-Mode : 1. LOCALITY-index
 1.1: Sampling Lab = NIVA
 (Predefined sequence)
 1.2: OTHER Sampling Labs
 (Position North:South,
 and West:East)
 : 2. Sample DATE.
 : 3. Tables may be separated into
 to "variable-groupes" tested
 as: Subno = 0 and Subno > 0

----- : -----

NOTES :

- NB ! The numeric values shown have been printed with a FIXED number of digits, and do not necessarily indicate analytical precision.
- For " Σ " variables (e.g. CB_ Σ 7, DD_ Σ), all the "<"-values (less than the detection limits) are counted only once. If two or more different "<"-values are present, the maximum of the least questionable (suspect) "<"-value is used. Any missing " Σ "-elements are ignored.
- If value is prefixed "<<", the number of "<" values is greater or equal to 25% of computed observations. Standard Deviation values are prefixed the character "~" if any "<" values are included.
- Footnotes consist of 4 parts:
 - 1: a letter code (e.g ? or s)
The letter code may include one or more characters indicating possible matching letters referenced before or after numbers.
 - 2: a count (in paranthesis)
 - 3: a "!" or ">"
"! " refer to notes BEFORE numeric values.
">" refer to notes AFTER numeric values.
 - 4: The footnote explanation.

Sample-area: **J26 Oslofjorden**. All concentrations on **Dry-weight basis**.
 Locality : **305 Steilelene**, Latitude: 59°49.10N, Longitude: 10°33.80E
 Sample date: **901107**, Sampling Lab: NIVA, Type: GC, Diameter: 050
 Est. sedimentation rate 003 mm/year. Unfractionated sample unless "*" then <63µm.

Slice.Depth cm up:lower	GSAMT %<63µ	MOCON %	CORG ppt	Al ppt	Cd ppm	Cu ppm	Hg ppm	Pb ppm	Zn ppt	Pb210 mBq/g
00:001 Count	1		2	2	2	2	2	2	2	
Mean	98.57		28.15	72.700	0.080	52.95	0.87	91.50	0.325	
St.dev			1.63	0.000	0.057	29.34	0.13	1.84	0.035	
00:002 Count	1	1	1	1	1	1	1	1	1	1
Mean	99.66	74.76	27.80	75.800	0.060	33.70	0.74	85.50	0.340	73.00
01:002 Count	1		2	2	2	2	2	2	2	
Mean	98.15		27.90	74.650	0.080	65.20	0.95	94.45	0.350	
St.dev			3.39	0.636	0.000	23.33	0.24	14.92	0.057	
02:004 Count	1	1	2	2	2	2	2	2	2	1
Mean	99.03	69.56	23.45	78.350	0.140	59.55	0.79	85.55	0.305	91.33
St.dev			7.00	2.616	0.014	28.50	0.54	34.58	0.106	
04:006 Count	1	1	2	2	2	2	2	2	2	1
Mean	98.88	64.97	22.35	81.050	0.125	59.75	0.65	78.15	0.285	61.33
St.dev			10.68	5.445	0.007	43.20	0.71	60.60	0.163	
06:008 Count		1								1
Mean		63.46								53.50
06:010 Count	1		2	2	2	2	2	2	2	
Mean	96.36		20.85	78.900	0.190	52.95	0.64	76.30	0.275	
St.dev			10.11	2.546	0.028	38.11	0.82	63.22	0.177	
08:010 Count		1								miss
Mean		62.19								1
10:012 Count		60.26								23.00
10:015 Count	1		2	2	2	2	2	2	2	
Mean	86.06		17.20	81.600	0.165	36.05	0.37	50.30	0.215	
St.dev			4.67	2.121	0.120	14.78	0.47	31.82	0.106	
12:014 Count		1								miss
Mean		59.73								1
14:016 Count		59.50								-1.67
15:020 Count	1		2	2	2	2	2	2	2	
Mean	99.04		13.90	85.750	0.120	28.30	0.04	38.50	0.165	
St.dev			1.41	1.768	0.000	3.96	0.01	15.56	0.021	
16:018 Count		1								miss
Mean		60.00								1
18:020 Count		59.68								1.33
20:022 Count		58.87								miss
22:024 Count		57.90								miss
24:026 Count		57.21								miss
26:028 Count		56.51								1
28:030 Count		54.33								0.83
30:032 Count		55.99								miss
32:034 Count		56.25								1
Mean										-1.33
St.dev										0.50

miss(7) | Missing value.

Sample area: J26 Oslofjorden. All concentrations on Dry weight basis.
 Locality : 365 Fårder area, Latitude: 59°00.40N, Longitude: 10°41.60E
 Sample date: 900512, Sampling Lab: NIVA, Type: GC, Diameter: 050
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless "uu" then <63µm.

Slice Depth cm up:lower	GSAMT %<63µ	MOCON %	CORG ppt	Al ppt	Li ppm	Cd ppm	Cu ppm	Hg ppm	Pb ppm	Zn ppt	Pb210 mBq/g
00:001	1	.	2	2	2	2	2	2	2	2	.
Count			22.05	47.300	65.250	0.105	24.55	0.09	51.25	0.125	.
Mean			0.49	4.667	2.475	0.007	2.05	0.01	1.77	0.007	.
St.dev			1	1	1	1	1	1	1	1	1
Count	99.30	1	22.20	47.900	64.000	0.100	21.90	0.12	52.50	0.130	s51.67
Mean			22.55	52.850	.	0.075	24.00	0.09	30.35	0.125	.
St.dev			0.07	8.556	.	0.021	0.85	0.02	3.61	0.007	.
Count	99.56	1	22.10	64.050	.	0.055	25.25	0.07	32.65	0.130	miss
Mean			0.28	4.455	.	0.007	1.77	0.01	2.05	0.000	.
St.dev			2	2	2	2	2	2	2	2	1
Count	99.69	1	22.70	54.000	.	0.040	24.75	0.06	34.40	0.140	s71.50
Mean			0.28	1.273	.	0.000	1.20	0.01	0.71	0.014	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.74	1	22.85	54.550	.	0.085	24.80	0.06	32.90	0.135	.
Mean			0.21	3.748	.	0.021	0.00	0.01	2.55	0.007	.
St.dev			1	1	1	1	1	1	1	1	1
Count	99.51	1	21.95	55.500	.	0.070	23.85	0.07	34.55	0.130	.
Mean			1.06	8.202	.	0.014	0.21	0.02	0.64	0.000	.
St.dev			.	.	.	.	.	.	.	.	1
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	1
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	s56.67
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	s56.67
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.	0.014	0.49	0.01	2.55	0.007	.
St.dev			.	.	.	.	.	.	.	.	miss
Count	99.71	1	20.65	51.300	.	0.080	22.65	0.09	36.20	0.135	.
Mean			0.78	3.960	.						

Tab.length cont'd J26, 36S Fårder area, 900512.

GSAMT MOON	AI	Li	Cd	Cu	Hg	Pb	Zn	Pb210
%63µ	ppt	ppm	ppm	ppm	ppm	ppm	ppt	mBq/g
.
1	miss
61.44	1
1	44.67
59.50
1	miss
60.68

s (9) ! Suspect value(s)
miss(12) ! Missing value.

Sample.area: J26 Oslofjorden. All concentrations on Dry weight basis.

Locality : 36S Fårder area, Latitude: 59°00.40N, Longitude: 10°41.60E

Sample date: 900512, Sampling Lab: NIVA, Type: GC, Diameter: 050

Est. sedimentation rate 001 mm/year. Unfractionated sample unless mm then <63µm.

CB28	CB31	CB52	CB101	CB105	CB118	CB128	CB138	CB149	CB153	CB156	CB170	CB180	CB_E7	CB_EE	DDEOP	DDEPP	DDIOP	DDTTP	TDEOP	TDEPP	DD_EE	DD_PP	
ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2
0.61	0.38	0.41	0.93	0.53	1.10	0.28	1.53	0.75	1.18	0.07	0.21	0.39	6.15	8.37	1.00	1.28	<0.05	0.33	0.32	0.01	0.04	1.04	<<4.02
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.96	0.68	0.00	0.08	0.01	0.01	0.04	0.04	1.68

Tab.width cont'd J26, 36S Fårder area, 900512.

HCHA	HCHB	HCHG	HC_E3	HCB	AID	NAP	NAPC1	NAPC2	NAPC3	FILE	PA	ANT	DBT	PAC1	DEB1C1	FLU	PYR	PAC2	DEB1C2	DEB1C3	BAA	CHR
ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
0.22	0.31	0.27	0.79	0.65	0.08	45.50	149.50	304.50	233.00	30.00	120.50	17.00	12.00	175.00	23.50	170.00	139.00	153.00	27.00	40.50	83.50	141.00
0.00	0.23	0.03	0.26	0.05	0.04	3.54	0.71	9.19	15.56	0.00	2.12	0.00	0.00	15.56	0.71	7.07	5.66	5.66	0.00	0.71	6.36	16.97

Tab.width cont'd J26, 36S Fårder area, 900512.

BBKF	BEP	BAP	PER	ICDP	DEAVA	BCHIP	DI_EE	PA_EE	PK_EE	PAHEE	SPAHEE
ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
2	2	2	2	2	2	2	2	2	2	2	2
334.00	135.50	110.50	72.50	129.50	28.00	114.50	732.50	2056.50	685.50	2789.00	2789.0
19.80	6.36	4.95	3.54	2.12	1.41	6.36	20.51	92.63	34.65	72.12	72.1

Sample.area: J99 Undefined. All concentrations on Dry-weight basis.

Locality : 15S Lista area, Latitude: 58°01.00N, Longitude: 06°34.30E

Sample date: 900507, Sampling Lab: NIVA, Type: GC, Diameter: 050

Est. sedimentation rate 001 mm/year. Unfractionated sample unless "*" then <63µm.

Slice.Depth cm up: lower	GSAMI %<63µ	MOCON %	CORG ppt	Al ppt	Li ppm	Cd ppm	Cu ppm	Hg ppm	Pb ppm	Zn ppt	Pb210 mBq/g
00:001	Count 88.93	.	2 17.20	2 55.250	2 61.750	2 0.095	2 21.65	2 0.04	2 58.75	2 0.110	.
	Mean	.	1.70	2.616	0.354	.	2.05	0.01	5.30	0.000	.
	St.dev	.	.	.	.	.	.	.	.	.	158.17
00:002	Count	1	.	.	.	.	.	.	.	.	.
	Mean	73.10	.	.	.	.	.	.	.	.	.
01:002	Count	.	2 17.65	2 65.700	.	2 0.040	2 22.05	2 0.04	2 46.00	2 0.115	.
	Mean	.	0.64	1.980	.	0.000	0.07	0.01	3.96	0.007	.
	St.dev	.	.	.	.	.	.	.	.	.	.
02:004	Count	1	2 16.20	2 51.650	.	2 0.065	2 20.05	2 0.03	2 51.75	2 0.115	1 130.67
	Mean	59.64	2.69	2.616	.	0.007	3.61	0.00	1.77	0.021	.
	St.dev	.	.	.	.	.	.	.	.	.	.
04:006	Count	1	2 15.30	2 60.400	.	2 0.070	2 20.00	2 0.04	2 45.25	2 0.110	1 64.33
	Mean	55.57	1.56	4.808	.	0.028	1.41	0.01	3.32	0.014	.
	St.dev	.	.	.	.	.	.	.	.	.	.
06:008	Count	1	.	.	.	.	.	.	.	.	miss
	Mean	51.54	.	.	.	.	.	.	.	.	.
06:010	Count	1	2 13.75	2 61.000	.	2 0.060	2 22.00	2 0.03	2 33.85	2 0.095	.
	Mean	.	1.34	0.424	.	0.000	1.13	0.01	2.76	0.007	.
	St.dev	.	.	.	.	.	.	.	.	.	.
08:010	Count	1	.	.	.	.	.	.	.	.	1
	Mean	51.68	.	.	.	.	.	.	.	.	0.33
10:012	Count	1	.	.	.	.	.	.	.	.	1
	Mean	53.90	.	.	.	.	.	.	.	.	2.00
10:015	Count	1	2 12.90	2 55.000	.	2 0.065	2 18.80	2 0.02	2 27.85	2 0.090	.
	Mean	.	0.99	7.354	.	0.007	1.27	0.00	5.18	0.000	.
	St.dev	.	.	.	.	.	.	.	.	.	.
12:014	Count	1	.	.	.	.	.	.	.	.	miss
	Mean	48.23	.	.	.	.	.	.	.	.	1
14:016	Count	1	.	.	.	.	.	.	.	.	1
	Mean	55.26	.	.	.	.	.	.	.	.	-2.83
15:020	Count	1	2 11.45	2 67.700	.	2 0.075	2 19.50	2 0.02	2 23.45	2 0.090	.
	Mean	.	2.76	7.212	.	0.007	2.40	0.00	3.18	0.000	.
	St.dev	.	.	.	.	.	.	.	.	.	.
16:018	Count	1	.	.	.	.	.	.	.	.	miss
	Mean	48.97	.	.	.	.	.	.	.	.	1
18:020	Count	1	.	.	.	.	.	.	.	.	1
	Mean	51.69	.	.	.	.	.	.	.	.	-0.67
20:022	Count	1	.	.	.	.	.	.	.	.	miss
	Mean	50.42	.	.	.	.	.	.	.	.	1
22:024	Count	1	.	.	.	.	.	.	.	.	14.67
	Mean	51.08	.	.	.	.	.	.	.	.	miss
24:026	Count	1	.	.	.	.	.	.	.	.	1
	Mean	50.08	.	.	.	.	.	.	.	.	miss
26:028	Count	1	.	.	.	.	.	.	.	.	1
	Mean	43.14	.	.	.	.	.	.	.	.	-0.33
28:030	Count	1	.	.	.	.	.	.	.	.	miss
	Mean	41.52	.	.	.	.	.	.	.	.	1
30:032	Count	1	.	.	.	.	.	.	.	.	miss
	Mean	40.56	.	.	.	.	.	.	.	.	-1.33

miss(6) | Missing value.

Sample area: **J99 Undefined**. All concentrations on **Dry weight basis**.
 Locality : **22S Bømlø area**, Latitude: 59°25.90N, Longitude: 04°50.20E
 Sample date: **900504**, Sampling Lab: NIVA, Type: GC, Diameter: 050
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless "miss" then <63µm.

Slice.Depth cm up: lower	GSAMI %<63µ	MOCON %	CORG ppt	Al ppt	Li ppm	Cd ppm	Cu ppm	Hg ppm	Pb ppm	Zn ppt	Pb210 mBq/g
00:001	Count 48.85	1	2	2	2	2	2	2	2	2	2
	Mean	8.55	52.900	32.750	11.50	0.045	11.50	0.02	39.25	0.060	.
	St.dev	2.19	10.465	9.546	2.69	0.007	2.69	0.01	11.67	0.014	.
00:002	Count	1	1	1	1	1	1	1	1	1	1
	Mean	64.93	13.00	56.900	46.000	0.060	17.50	0.02	65.00	0.090	184.00
	Count	1	2	2	2	2	2	2	2	2	2
	Mean	53.50	8.35	52.900	12.55	0.03	12.55	0.03	32.55	0.065	.
	St.dev	1.48	5.940	1.48	0.92	0.00	0.92	0.00	8.41	0.021	.
02:004	Count	1	2	2	2	2	2	2	2	2	1
	Mean	53.11	10.15	59.700	14.10	0.02	14.10	0.02	46.10	0.760	63.33
	St.dev	1	1.20	4.384	0.078	0.00	1.13	0.00	1.41	0.962	.
04:006	Count	1	2	2	2	2	2	2	2	2	miss
	Mean	53.63	9.55	58.500	13.65	0.02	13.65	0.02	31.75	0.130	miss
	St.dev	0.07	3.111	0.000	2.33	0.00	2.33	0.00	6.15	0.085	.
06:008	Count	1	.	.	.	.	.	.	.	.	1
	Mean	43.42	.	.	.	.	.	.	.	.	4.50
06:010	Count	1	2	2	2	2	2	2	2	2	2
	Mean	44.98	7.45	50.500	10.60	0.02	10.60	0.02	21.30	0.055	.
	St.dev	0.92	2.970	0.000	0.14	0.01	0.14	0.01	1.84	0.007	.
08:010	Count	1	.	.	.	.	.	.	.	.	1
	Mean	28.29	.	.	.	.	.	.	.	.	-1.33
10:012	Count	1	.	.	.	.	.	.	.	.	1
	Mean	35.28	.	.	.	.	.	.	.	.	0.67
10:015	Count	1	2	2	2	2	2	2	2	2	2
	Mean	37.87	5.95	45.600	9.45	<<0.01	9.45	<<0.01	14.95	0.060	.
	St.dev	1.48	1.556	0.007	0.07	0.00	0.07	0.00	1.48	0.014	.
12:014	Count	1	.	.	.	.	.	.	.	.	1
	Mean	32.24	.	.	.	.	.	.	.	.	-1.33
14:016	Count	1	.	.	.	.	.	.	.	.	1
	Mean	37.24	.	.	.	.	.	.	.	.	2.17
15:020	Count	1	2	2	2	2	2	2	2	2	2
	Mean	33.97	5.60	56.200	10.80	0.01	10.80	0.01	17.85	0.115	.
	St.dev	0.99	11.597	0.007	2.26	0.00	2.26	0.00	2.47	0.078	.
16:018	Count	1	.	.	.	.	.	.	.	.	miss
	Mean	39.75	.	.	.	.	.	.	.	.	miss
18:020	Count	1	.	.	.	.	.	.	.	.	miss
	Mean	33.15	.	.	.	.	.	.	.	.	miss
20:022	Count	1	.	.	.	.	.	.	.	.	miss
	Mean	32.68	.	.	.	.	.	.	.	.	miss
22:023	Count	1	.	.	.	.	.	.	.	.	miss
	Mean	27.48	.	.	.	.	.	.	.	.	miss

miss(5) ! Missing value.

Sample area: **J99 Undefined**. All concentrations on **Dry weight basis**.
 Locality : **22S Bømlø area**, Latitude: 59°25.90N, Longitude: 04°50.20E
 Sample date: **900504**, Sampling Lab: NIVA, Type: GC, Diameter: 050
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless "miss" then <63µm.

Slice.Depth cm up: lower	CB28 ppb	CB31 ppb	CB52 ppb	CB101 ppb	CB105 ppb	CB118 ppb	CB128 ppb	CB138 ppb	CB149 ppb	CB153 ppb	CB170 ppb	CB180 ppb	CB E7 ppb	CB E7 ppb	DEEPP ppb	DDEPP ppb	DDTOP ppb	DDTTPP ppb	TDDEOP ppb	TDDEPP ppb	DD E7 ppb	
00:002	Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Mean	0.05	0.03	0.08	0.14	0.08	0.15	0.05	0.27	0.14	0.06	0.13	1.03	<<1.42	0.08	0.27	0.05	0.32	0.11	0.29	1.10	
	St.dev	0.01	0.01	0.01	0.01	0.03	0.01	0.05	0.05	0.03	0.00	0.01	0.16	0.25	0.02	0.05	0.01	0.08	0.01	0.07	0.24	

Sample area: **J62 Hardangerfjorden**. All concentrations on **Dry weight basis**.
 Locality : **67S Strandebarbm**, Latitude: 60°13.50N, Longitude: 06°05.10E
 Sample date: **901102** Sampling Lab: NIVA, Type: GC, Diameter: 050
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless *** then <63µm.

Slice-Depth cm up: lower	GSAMT %<63µ	MOCCON %	CORG ppt	Al ppt	Cd ppm	Cu ppm	Hg ppm	Pb ppm	Zn ppt	Pb210 mBq/g
00:001	Count 1	14.20	2	2	2	2	2	2	2	2
	Mean 95.96	0.57	0.155	0.007	0.155	37.10	0.28	79.40	0.250	.
	St.dev	1	1	1	1	4.38	0.01	5.09	0.028	.
00:002	Count 1	64.28	2	2	2	32.40	0.24	72.20	0.200	115.50
	Mean	13.70	0.110	0.110	0.110	32.90	0.29	85.20	0.220	.
	St.dev	1	1	1	1	0.28	0.01	5.23	0.000	.
02:004	Count 1	57.59	2	2	2	34.75	0.27	84.05	0.220	119.83
	Mean	15.20	0.135	0.135	0.135	0.49	0.08	13.08	0.014	.
	St.dev	1	1	1	1	0.16	0.16	61.05	0.180	85.00
04:006	Count 1	57.68	2	2	2	35.40	0.01	4.17	0.014	.
	Mean	0.00	1.061	0.007	0.007	.	.	.	.	97.00
	St.dev	1	1	1	1	.	.	.	.	.
06:008	Count 1	55.47	2	2	2	32.45	0.10	54.35	0.165	.
	Mean	13.95	58.450	0.110	0.110	0.07	0.01	7.99	0.007	.
	St.dev	1	1	1	1	0.014	0.014	.	.	104.83
08:010	Count 1	56.53	2	2	2	32.15	0.04	41.45	0.150	.
	Mean	55.72	0.07	0.021	0.021	1.20	0.03	0.64	0.000	18.50
	St.dev	1	1	1	1	.	.	.	.	.
10:012	Count 1	51.91	2	2	2	30.35	0.02	34.60	0.140	.
	Mean	50.57	11.80	63.400	0.125	1.48	0.00	4.67	0.000	1.67
	St.dev	1	1	1	1	.	.	.	.	37.50
12:014	Count 1	49.29	2	2	2	1.80	0.00	.	.	24.00
	Mean	48.85	1.41	0.566	0.021	.	.	.	.	.
	St.dev	1	1	1	1	.	.	.	.	.
14:016	Count 1	48.85	2	2	2	.	.	.	.	14.67
	Mean	48.85	.	.	.	.	.	.	.	.
	St.dev	1	1	1	1	.	.	.	.	.
15:020	Count 1	48.34	2	2	2	.	.	.	.	0.33
	Mean	48.34	.	.	.	.	.	.	.	.
	St.dev	1	1	1	1	.	.	.	.	.

Sample area: **J62 Hardangerfjorden**. All concentrations on **Dry weight basis**.
 Locality : **67S Strandebarbm**, Latitude: 60°13.50N, Longitude: 06°05.10E
 Sample date: **901102** Sampling Lab: NIVA, Type: GC, Diameter: 050
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless *** then <63µm.

Slice-Depth cm up: lower	CB28	CB31	CB52	CB101	CB105	CB118	CB128	CB138	CB149	CB153	CB156	CB170	CB180	CB_Σ7	CB_ΣΣ	DDEPP	DDVOP	DDVTPP	TDDEPP	TDVOP	TDVTPP	DD_ΣΣ	TD_ΣΣ	
00:002	Count 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Mean	0.04	0.03	0.08	0.18	0.12	0.07	0.46	0.25	0.35	<0.04	0.12	0.27	1.59	<2.21	0.95	0.22	3.95	0.32	0.98	0.98	6.51	6.51	
	St.dev	0.01	0.00	0.04	0.06	0.04	0.01	0.12	0.06	0.11	0.01	0.03	0.08	0.47	0.62	0.18	0.01	1.36	0.05	0.05	0.05	1.03	1.03	

Tab.width cont'd J99, 472, 900416.

Slice.Depth cm up:lower	DI ΣΣ ppb	PA ΣΣ ppb	PK ΣΣ ppb	PAHΣΣ ppb	SPAH ppb
00:001	Count Mean St.dev	2 53.50 2.12	2 403.50 2.12	2 205.00 2.83	2 457.00 0.0

Sample.area: J99 Undefined. All concentrations on Dry-weight basis.

Locality : 571, Latitude: 59°35.00N, Longitude: 00°42.00E
 Sample date: 900428, Sampling Lab: IMRN, Type: GS, Diameter: 100
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless ^{mm} then <63µm.

Slice.Depth cm up:lower	GSAMT %<63µ	CORG ppt	Al ppt	As ppm	Cd ppm	Cr ppm	Cu ppm	Hg ppm	Ni ppm	Pb ppm	Zn ppt	CB28 ppb	CB31 ppb	CB52 ppb	CB101 ppb	CB105 ppb	CB118 ppb	CB128 ppb	CB138 ppb	CB149 ppb	CB153 ppb	CB156 ppb	CB170 ppb	
00:001	Count Mean St.dev	2 16.00 0.00	2 5.40 0.14	2 27.050 1.485	2 2.9 0.1	2 <<.025 0.007	2 40.55 0.21	2 4.05 0.07	2 0.01 0.00	2 11.30 1.56	2 12.00 0.99	2 0.02 0.000	2 0.01 0.000	2 <<0.04 0.02	2 0.06 0.05	2 0.03 0.01	2 0.02 0.01	2 0.09 0.06	2 0.020 0.040	2 0.06 0.014	2 0.06 0.028	2 0.08 0.00	2 <<0.03 0.03	2 0.03 0.02

Tab.width cont'd J99, 571, 900428.

Slice.Depth cm up:lower	CB180 ppb	CB Σ7 ppb	CB ΣΣ ppb	DBOP ppb	DBEPP ppb	DTOP ppb	DTPPP ppb	TDROP ppb	TDEPP ppb	DO ΣΣ ppb	HCHA ppb	HCHG ppb	HC Σ3 ppb	HCB ppb	ALD ppb	DIBED ppb	END ppb	TMONC ppb	ACDAN ppb	GDAN ppb	OCDAN ppb	NAP ppb	NAPC1 ppb	
00:001	Count Mean St.dev	2 0.06 0.04	2 <<0.36 0.18	2 0.01 0.27	2 0.06 0.00	2 <<0.03 0.03	2 0.05 0.01	2 0.04 0.01	2 0.05 0.00	2 <<0.23 0.01	2 0.01 0.00	2 0.06 0.01	2 0.07 0.01	2 0.03 0.01	2 <<.03 0.03	2 0.02 0.01	2 <<.05 0.00	2 0.00 0.000	2 0.020 0.000	2 0.040 0.014	2 <<.030 0.028	2 0.08 0.00	2 <<1.00 0.00	2 2.50 0.71

Tab.width cont'd J99, 571, 900428.

Slice.Depth cm up:lower	NAPC2 ppb	NAPC3 ppb	FLIE ppb	PA ppb	ANT ppb	DBT ppb	PAC1 ppb	DBTC1 ppb	FLU ppb	PYR ppb	PAC2 ppb	DBTC2 ppb	DBTC3 ppb	BAA ppb	CHR ppb	BBKF ppb	BEP ppb	BAP ppb	PER ppb	ICDP ppb	DRAMA ppb	BGHP ppb	DI ΣΣ ppb
00:001	Count Mean St.dev	2 6.50 0.71	2 5.00 0.00	2 <<1.00 0.71	2 4.50 0.00	2 <<1.00 0.00	2 6.50 0.71	2 <<1.00 0.00	2 9.50 0.71	2 5.50 0.71	2 6.50 0.71	2 1.00 0.00	2 1.00 0.00	2 5.50 0.71	2 8.00 1.41	2 53.50 0.71	2 16.00 0.00	2 9.00 0.00	2 2.00 0.00	2 36.50 3.54	2 4.00 0.00	2 30.50 4.95	2 <<15.00 0.00

Tab.width cont'd J99, 571, 900428.

Slice.Depth cm up:lower	PA ΣΣ ppb	PK ΣΣ ppb	PAHΣΣ ppb	SPAH ppb	
00:001	Count Mean St.dev	2 <<201.50 3.54	2 108.50 2.12	2 <<216.00 4.24	2 215.0 4.2

Sample.area: J99 Undefined. All concentrations on Dry-weight basis.

Locality : 474, Latitude: 59°26.00N, Longitude: 04°50.00E
 Sample date: 900417, Sampling Lab: IMRN, Type: GS, Diameter: 100
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless ^{mm} then <63µm.

Slice.Depth cm up:lower	GSAMT %<63µ	CORG ppt	Al ppt	Li ppm	As ppm	Cd ppm	Cr ppm	Cu ppm	Hg ppm	Ni ppm	Pb ppm	Zn ppt	Pb ppm	CB28 ppb	CB31 ppb	CB52 ppb	CB101 ppb	CB105 ppb	CB118 ppb	CB128 ppb	CB138 ppb	CB149 ppb	CB153 ppb	CB156 ppb
00:001	Count Mean St.dev	3 57.33 13.28	3 9.80 2.52	3 53.735 4.375	3 39.333 6.028	3 0.060 0.000	3 69.77 7.61	3 18.77 1.65	3 0.02 0.01	3 24.60 4.29	3 47.50 16.39	3 0.077 0.015	3 0.08 0.07	3 0.09 0.08	3 0.09 0.08	3 0.06 0.02	3 0.17 0.07	3 <<0.06 0.02	3 0.15 0.07	3 0.05 0.02	3 0.32 0.17	3 0.17 0.08	3 0.28 0.15	3 0.02 0.02

Tab.width cont'd J99, 488, 900418.

Slice.Depth cm up:lower	DI ΣΣ ppb	PA ΣΣ ppb	PK ΣΣ ppb	PAHΣΣ ppb	SPAH ppb
00:001	Count Mean St.dev	3 <<4.33 2.52	3 <<27.00 9.87	3 <<50.67 3.46	3 49.7 12.1

Sample.area: J99 Undefined. All concentrations on Dry.weight basis.

Locality : 482, Latitude: 59°20.00N, Longitude: 03°50.00E
 Sample date: 900417, Sampling Lab: IMRN, Type: GS, Diameter: 100
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless ^{mm} then <63µm.

Slice.Depth cm up:lower	GSAMT %<63µ	CORG ppt	Al ppt	Li ppm	As ppm	Cd ppm	Cr ppm	Cu ppm	Hg ppm	Ni ppm	Pb ppm	Zn ppt	CB28 ppb	CB31 ppb	CB52 ppb	CB101 ppb	CB105 ppb	CB118 ppb	CB128 ppb	CB138 ppb	CB149 ppb	CB153 ppb	CB156 ppb
00:001	Count Mean St.dev	3 96.00 1.00	3 15.07 0.21	3 45.300 7.627	3 53.167 1.041	3 34.2 7.1	3 0.077 0.012	3 71.50 11.74	3 22.73 1.72	3 <<0.01 0.00	3 37.07 2.22	3 55.00 0.00	3 0.090 0.000	3 0.09 0.05	3 0.13 0.09	3 0.07 0.02	3 <<0.05 0.00	3 0.15 0.05	3 0.06 0.02	3 0.43 0.21	3 0.27 0.16	3 0.38 0.19	3 0.04 0.02

Tab.width cont'd J99, 482, 900417.

Slice.Depth cm up:lower	CB170 ppb	CB180 ppb	CB Σ7 ppb	CB ΣΣ ppb	DEBPP ppb	DETOP ppb	DETPP ppb	TDEBP ppb	TDEPP ppb	DD ΣΣ ppb	HCHA ppb	HCHG ppb	HC Σ3 ppb	HCB ppb	ALD ppb	DIELD ppb	END ppb	INONC ppb	ACDAN ppb	GC DAN ppb	OC DAN ppb	NAP ppb
00:001	Count Mean St.dev	3 0.12 0.06	3 0.32 0.14	3 1.69 0.72	3 <<2.35 0.93	3 0.06 0.02	3 0.36 0.08	3 0.75 0.28	3 0.23 0.01	3 0.39 0.13	3 1.84 0.50	3 0.02 0.01	3 <<0.05 0.00	3 0.15 0.05	3 <<0.04 0.02	3 0.05 0.01	3 <<0.05 0.00	3 <<.050 0.000	3 <<.033 0.015	3 <<.037 0.023	3 0.000 0.000	3 10.67 1.15

Tab.width cont'd J99, 482, 900417.

Slice.Depth cm up:lower	NAPC1 ppb	NAPC2 ppb	NAPC3 ppb	FILE ppb	PA ppb	ANT ppb	DBT ppb	PAC1 ppb	DBTC1 ppb	FLU ppb	PYR ppb	PAC2 ppb	DBTC2 ppb	DBTC3 ppb	BAA ppb	CHR ppb	BBKF ppb	BEP ppb	BAP ppb	PER ppb	ICDP ppb	DEBAH ppb	BGHIP ppb
00:001	Count Mean St.dev	3 28.33 1.53	3 48.67 1.53	3 33.00 1.00	3 4.00 0.00	3 36.33 1.53	3 4.00 0.00	3 2.67 0.58	3 41.00 1.73	3 47.67 2.89	3 37.00 1.73	3 28.67 1.15	3 5.67 0.58	3 4.00 0.00	3 25.33 2.08	3 45.33 3.06	3 202.33 9.71	3 69.00 6.24	3 31.67 2.52	3 14.67 0.58	3 124.00 14.80	3 16.67 2.08	3 97.33 16.17

Tab.width cont'd J99, 482, 900417.

Slice.Depth cm up:lower	DI ΣΣ ppb	PA ΣΣ ppb	PK ΣΣ ppb	PAHΣΣ ppb	SPAH ppb
00:001	Count Mean St.dev	3 120.67 4.51	3 841.33 55.01	3 400.00 29.46	3 962.0 54.7

Sample.area: J99 Undefined. All concentrations on Dry.weight basis.

Locality : 570, Latitude: 59°15.00N, Longitude: 00°44.00E
 Sample date: 900428, Sampling Lab: IMRN, Type: GS, Diameter: 100
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless ^{mm} then <63µm.

Slice.Depth cm up:lower	GSAMT %<63µ	CORG ppt	Al ppt	As ppm	Cd ppm	Cr ppm	Cu ppm	Hg ppm	Ni ppm	Pb ppm	Zn ppt	CB28 ppb	CB31 ppb	CB52 ppb	CB101 ppb	CB105 ppb	CB118 ppb	CB128 ppb	CB138 ppb	CB149 ppb	CB153 ppb	CB156 ppb	CB170 ppb
00:001	Count Mean St.dev	2 28.00 1.41	2 6.40 0.14	2 31.050 0.354	2 3.9 0.6	2 37.85 11.38	2 4.95 0.07	2 0.02 0.01	2 12.05 1.48	2 11.50 1.27	2 0.025 0.007	2 0.01 0.00	2 0.01 0.00	2 0.02 0.00	2 0.05 0.01	2 0.02 0.00	2 0.09 0.01	2 0.02 0.00	2 0.06 0.01	2 0.08 0.01	2 0.01 0.00	2 0.01 0.00	2 0.03 0.01

Tab.width cont'd J99, 750, 900526.

Slice.Depth cm up:lower	CB180 CB Σ7 CB ΣΣ DBEOP DDEPP DTOP DTIPP TDBOP TDEPP DD ΣΣ		HCHA HCHG HC Σ3 HCB ALD DIELD		END TNONC ACIDAN GGDAN OCCAN		NAP NAPCI	
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
00:001	2	2	2	2	2	2	2	2
Count	1.59	2.32	0.03	0.13	0.09	0.08	0.045	0.050
Mean	0.18	0.25	0.02	0.00	0.04	0.03	0.021	0.028
St.dev	0.01	0.25	0.05	0.00	0.01	0.01	0.021	0.028

Tab.width cont'd J99, 750, 900526.

Slice.Depth cm up:lower	NAPC2 NAPC3 FILE PA ANT DBT PAC1 DBIC1		FLU PYR PAC2 DBIC2 DBIC3 BAA CHR BBKF BEP		BAP PER ICDP DBAHA BGHIP		DI ΣΣ	
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
00:001	2	2	2	2	2	2	2	2
Count	114.50	85.00	5.00	83.50	10.00	101.50	111.50	71.00
Mean	50.20	39.60	2.83	37.48	5.66	53.03	55.86	36.77
St.dev	114.50	85.00	5.00	83.50	10.00	101.50	111.50	71.00

Tab.width cont'd J99, 750, 900526.

Slice.Depth cm up:lower	PA ΣΣ PK ΣΣ PAHΣΣ SPAH		Zn Pb Ni Hg Cu Cr Cd As				
	ppb	ppb	ppm	ppm	ppm	ppm	ppm
00:001	2	2	2	2	2	2	2
Count	1276.50	525.00	1558.50	1558.50	1558.50	1558.50	1558.50
Mean	631.45	263.04	760.14	760.14	760.14	760.14	760.14
St.dev	1276.50	525.00	1558.50	1558.50	1558.50	1558.50	1558.50

Sample.area: J99 Undefined. All concentrations on Dry.weight basis.
 Locality : 568 , Latitude: 58°25.00N, Longitude: 00°36.00E
 Sample date: 900427 , Sampling Lab: JMRN, Type: GS, Diameter: 100
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless ^{mm} then <63µm.

Slice.Depth cm up:lower	GSMT CORG A1 As		Cu Cr Cd		Ni Hg Pb Zn		CB31 CB28 CB52 CB101		CB105 CB118 CB128 CB138		CB149 CB153 CB156		CB170	
	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb
00:001	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Count	10.80	42.600	5.3	9.05	9.05	22.40	16.25	0.045	0.045	0.045	0.045	0.045	0.045	0.045
Mean	1.41	6.081	0.2	0.49	0.49	0.14	1.20	0.007	0.007	0.007	0.007	0.007	0.007	0.007
St.dev	1.41	6.081	0.2	0.49	0.49	0.14	1.20	0.007	0.007	0.007	0.007	0.007	0.007	0.007

Tab.width cont'd J99, 568, 900427.

Slice.Depth cm up:lower	CB180 CB Σ7 CB ΣΣ DBEOP DDEPP DTOP DTIPP TDBOP TDEPP DD ΣΣ		HCHA HCHG HC Σ3 HCB ALD DIELD		END TNONC ACIDAN GGDAN OCCAN		NAP NAPCI	
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
00:001	2	2	2	2	2	2	2	2
Count	0.06	<<0.23	<<0.32	<<0.04	0.06	<<0.03	<<0.030	<<0.030
Mean	0.01	0.05	0.01	0.02	0.04	0.03	0.020	0.020
St.dev	0.01	0.05	0.01	0.02	0.04	0.03	0.020	0.020

Tab.width cont'd J99, 568, 900427.

Slice.Depth cm up:lower	NAPC2 NAPC3 FILE PA ANT DBT PAC1 DBIC1		FLU PYR PAC2 DBIC2 DBIC3 BAA CHR BBKF BEP		BAP PER ICDP DBAHA BGHIP		DI ΣΣ	
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
00:001	2	2	2	2	2	2	2	2
Count	16.50	12.00	1.00	16.00	1.00	16.00	26.50	14.00
Mean	0.71	1.41	0.00	0.00	0.00	0.00	0.71	0.00
St.dev	0.71	1.41	0.00	0.00	0.00	0.00	0.71	0.00

Tab.width cont'd J99, 754, 900526.

Slice.Depth cm up:lower	PA ΣΣ ppb	PK ΣΣ ppb	PAHE ΣΣ ppb	SPAH ppb
00:001	Count Mean St.dev	2 1891.00 188.09	2 824.50 36.06	2 2243.00 230.52
		2 2243.0 230.5		

Sample.area: J99 Undefined. All concentrations on Dry-weight basis.

Locality : 717, Latitude: 58°13.00N, Longitude: 10°33.00E
 Sample date: 900524, Sampling Lab: IMRN, Type: GS, Diameter: 100
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless ^{mm} then <63µm.

Slice.Depth cm up:lower	GSMT %<63µ	CORG ppt	Al ppt	As ppm	Cd ppm	Cr ppm	Cu ppm	Hg ppm	Ni ppm	Pb ppm	Zn ppt	CB28 ppb	CB31 ppb	CB52 ppb	CB101 ppb	CB105 ppb	CB118 ppb	CB128 ppb	CB138 ppb	CB149 ppb	CB153 ppb	CB156 ppb	CB170 ppb
00:001	Count Mean St.dev	2 99.50 0.71	2 25.10 0.00	2 54.850 2.475	2 106.50 6.36	2 23.4 0.9	2 25.60 3.39	2 0.03 0.01	2 38.75 1.48	2 43.20 7.07	2 0.120 0.014	2 0.31 0.04	2 0.24 0.03	2 0.12 0.01	2 0.32 0.05	2 0.19 0.00	2 0.34 0.02	2 0.12 0.02	2 0.49 0.04	2 0.26 0.02	2 0.41 0.04	2 0.05 0.00	2 0.08 0.01

Tab.width cont'd J99, 717, 900524.

Slice.Depth cm up:lower	CB180 ppb	CB Σ7 ppb	CB ΣΣ ppb	DBOP ppb	DEPP ppb	DTOP ppb	DTIPP ppb	TDBOP ppb	TDEPP ppb	DD ΣΣ ppb	HCHA ppb	HCHG ppb	HC Σ3 ppb	HC B ppb	ALD ppb	DIELD ppb	END ppb	INOC ppb	ACDAN ppb	GCDAN ppb	OC DAN ppb	NAP ppb	NAPCI ppb
00:001	Count Mean St.dev	2 0.15 0.01	2 2.12 0.21	2 3.06 0.29	2 0.14 0.01	2 0.58 0.06	2 0.21 0.07	2 0.18 0.02	2 0.70 0.01	2 <<1.89 0.01	2 0.16 0.02	2 0.17 0.05	2 0.32 0.07	2 0.47 0.02	2 0.05 0.01	2 0.11 0.00	2 <<.05 0.00	2 <<.050 0.000	2 <<.040 0.014	2 <<.030 0.028	2 38.00 2.83	2 114.50 6.36	

Tab.width cont'd J99, 717, 900524.

Slice.Depth cm up:lower	NAPC2 ppb	NAPC3 ppb	FLE ppb	PA ppb	ANT ppb	DBT ppb	PAC1 ppb	DBTC1 ppb	FLU ppb	PYR ppb	PAC2 ppb	DBTC2 ppb	DBTC3 ppb	BAA ppb	CHR ppb	BAP ppb	BEP ppb	PER ppb	ICDP ppb	DBAHA ppb	BGHIP ppb	DI ΣΣ ppb
00:001	Count Mean St.dev	2 206.00 9.90	2 151.50 6.36	2 16.00 3.54	2 10.00 0.00	2 162.00 2.83	2 20.50 0.71	2 155.50 7.78	2 124.50 7.78	2 126.50 6.36	2 22.00 0.00	2 29.50 0.71	2 91.00 1.41	2 151.00 7.07	2 468.50 60.10	2 110.50 12.02	2 159.00 38.18	2 47.00 5.66	2 63.50 6.36	2 16.00 4.24	2 49.00 12.73	2 510.00 25.46

Tab.width cont'd J99, 717, 900524.

Slice.Depth cm up:lower	PA ΣΣ ppb	PK ΣΣ ppb	PAHE ΣΣ ppb	SPAH ppb
00:001	Count Mean St.dev	2 1945.50 169.00	2 749.50 84.15	2 2455.50 194.45
		2 2455.5 194.5		

Sample.area: J99 Undefined. All concentrations on Dry-weight basis.

Locality : 677, Latitude: 58°10.00N, Longitude: 09°30.00E
 Sample date: 900521, Sampling Lab: IMRN, Type: GS, Diameter: 100
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless ^{mm} then <63µm.

Slice.Depth cm up:lower	GSMT %<63µ	CORG ppt	Al ppt	Li ppm	As ppm	Cd ppm	Cr ppm	Cu ppm	Hg ppm	Ni ppm	Pb ppm	Zn ppt	CB28 ppb	CB31 ppb	CB52 ppb	CB101 ppb	CB105 ppb	CB118 ppb	CB128 ppb	CB138 ppb	CB149 ppb	CB153 ppb	CB156 ppb
00:001	Count Mean St.dev	3 100.00 0.00	3 21.37 0.70	3 60.300 4.503	3 25.3 7.4	3 0.100 0.000	3 92.23 4.61	3 24.70 0.61	3 0.02 0.01	3 35.00 3.54	3 83.33 7.22	3 0.143 0.006	3 0.21 0.12	3 0.18 0.11	3 0.12 0.05	3 0.37 0.15	3 0.29 0.12	3 0.15 0.08	3 0.65 0.20	3 0.40 0.11	3 0.46 0.13	3 0.05 0.02	

Tab.width cont'd J99, 563, 900426.

CB170 CB180		CB Σ7	CB ΣΣ	DBOP	DBEPP	DBTOP	DTIPP	DTOPP	DD ΣΣ	HCHA	HCHG	HC Σ3	HCB	ALD	DIELD	END	TNOC	ACDAN	GC DAN	OC DAN	NAP
ppb		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
00:001	Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Mean	0.10	1.58	2.26	0.06	0.31	<<0.06	0.22	0.18	0.46	<<1.29	0.05	0.37	0.03	0.06	0.04	<<0.050	<<0.050	0.030	<<0.023	21.33
	St.dev	0.02	0.21	0.33	0.01	0.08	0.02	0.05	0.03	0.06	0.14	0.03	0.16	0.01	0.02	0.01	0.000	0.000	0.000	0.023	6.11

Tab.width cont'd J99, 563, 900426.

NAPCI NAPC2 NAPC3		FILE	PA	ANT	DBT	PAC1	DBTC1	FLU	PYR	PAC2	DBTC2	DBTC3	BAA	CHR	BBKF	BEP	BAP	PER	ICDP	DRAHA	BGHP
ppb		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
00:001	Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Mean	52.67	94.00	65.67	9.00	54.33	8.00	4.67	72.00	8.33	93.67	66.33	59.00	68.67	312.67	113.33	67.67	31.00	152.33	23.00	139.33
	St.dev	13.61	25.24	15.53	2.65	17.10	1.73	1.15	18.19	2.31	30.86	21.46	15.59	5.51	96.97	37.98	20.82	10.58	41.96	5.29	32.32

Tab.width cont'd J99, 563, 900426.

DI ΣΣ		PA ΣΣ	PK ΣΣ	PARΣΣ	SEPAH
ppb		ppb	ppb	ppb	ppb
00:001	Count	3	3	3	3
	Mean	233.67	1347.67	596.33	1581.33
	St.dev	60.47	369.01	167.75	429.20

Sample areas: J99 Undefined. All concentrations on Dry-weight basis.
 Locality : 673, Latitude: 57°55.00N, Longitude: 08°10.00E
 Sample date: 900520 Sampling Lab: IMRN, Type: GS, Diameter: 100
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless ^{UKU} then <63µm.

GSMT CORG		Al	Li	As	Cd	Cu	Cr	Hg	Ni	Pb	Zn	CB28	CB31	CB52	CB101	CB105	CB118	CB128	CB138	CB149	CB153	CB156
%<63µ		ppt	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppt	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
00:001	Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Mean	100.00	21.67	59.133	72.500	22.1	0.083	0.72	0.07	0.05	0.07	0.05	0.07	0.05	0.07	0.05	0.07	0.06	0.20	0.86	0.49	0.60
	St.dev	0.00	0.38	4.250	0.500	3.0	0.006	8.14	1.93	0.01	0.02	0.03	0.03	0.04	0.18	0.05	0.07	0.06	0.20	0.17	0.20	0.26

Tab.width cont'd J99, 673, 900520.

CB170 CB180		CB Σ7	CB ΣΣ	DBOP	DBEPP	DBTOP	DTIPP	DTOPP	DD ΣΣ	HCHA	HCHG	HC Σ3	HCB	ALD	DIELD	END	TNOC	ACDAN	GC DAN	OC DAN	NAP
ppb		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
00:001	Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Mean	0.18	0.29	3.12	4.64	0.16	0.72	<<0.12	0.50	1.29	<<3.25	0.14	0.10	0.23	0.20	0.09	<<0.050	<<0.053	0.050	0.010	47.67
	St.dev	0.05	0.13	0.87	1.20	0.05	0.07	0.13	0.20	0.02	0.21	0.02	0.04	0.01	0.02	0.01	0.000	0.006	0.017	0.000	6.35

Tab.width cont'd J99, 673, 900520.

NAPCI NAPC2 NAPC3		FILE	PA	ANT	DBT	PAC1	DBTC1	FLU	PYR	PAC2	DBTC2	DBTC3	BAA	CHR	BBKF	BEP	BAP	PER	ICDP	DRAHA	BGHP
ppb		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
00:001	Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Mean	98.67	205.00	155.00	21.00	129.33	17.33	11.67	170.00	20.67	192.33	150.33	124.33	150.33	627.33	202.67	129.33	57.33	96.00	22.00	69.67
	St.dev	20.98	16.82	17.35	3.00	13.05	2.08	1.53	15.10	2.52	3.51	3.00	14.57	25.79	104.04	18.77	11.24	0.58	22.00	4.36	14.43

Tab.width cont'd J99, 673, 900520.

Slice.Depth cm up:lower	DI	ΣΣ	PA	ΣΣ	PK	ΣΣ	PAHΣΣ	SPAH
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
00:001	Count	3	3	3	3	3	3	3
	Mean	506.33	2323.33	965.00	2829.67	2829.7		
	St.dev	34.00	240.50	119.25	259.61	259.6		

Sample.area: J99 Undefined. All concentrations on Dry.weight basis.

Locality : 847, Latitude: 57°54.00N, Longitude: 07°40.00E
 Sample date: 900530, Sampling Lab: IMRN, Type: GS, Diameter: 100
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless ^{mm} then <63µm.

Slice.Depth cm up:lower	GSAMT %<63µ	CORG		Al	As	Cd	Cr	Cu	Hg	Ni	Pb	Zn	CB28	CB31	CB52	CB101	CB105	CB118	CB128	CB138	CB149	CB153	CB156	CB170
		ppt	ppt	ppt	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppt	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
00:001	Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Mean	99.00	22.10	49.800	18.8	0.075	92.70	27.20	0.05	36.70	44.60	0.130	0.44	0.33	0.20	0.63	0.37	0.51	0.35	1.20	0.80	0.75	0.12	0.29
	St.dev	0.00	0.28	3.536	0.6	0.007	2.12	0.14	0.01	3.54	3.11	0.000	0.02	0.02	0.02	0.40	0.05	0.10	0.04	0.69	0.64	0.52	0.05	0.21

Tab.width cont'd J99, 847, 900530.

Slice.Depth cm up:lower	CB180	CB	ΣΣ	CB	ΣΣ	DDEPP	DDIOP	DDIOP	DDIOP	DDIOP	DDIOP	DDIOP	DDIOP	DDIOP	DDIOP	DDIOP	DDIOP	DDIOP	DDIOP	DDIOP	DDIOP	DDIOP	DDIOP	DDIOP	DDIOP
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
00:001	Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Mean	0.40	4.12	6.36	0.19	0.65	<0.05	0.44	0.28	0.90	<2.50	0.14	0.11	0.25	0.95	0.06	0.15	<<.05	0.080	0.040	0.025	43.00	112.50		
	St.dev	0.36	2.03	3.00	0.01	0.04	0.00	0.01	0.03	0.02	0.03	0.06	0.06	0.11	0.11	0.00	0.03	0.00	0.028	0.000	0.007	5.66	16.26		

Tab.width cont'd J99, 847, 900530.

Slice.Depth cm up:lower	NAPC2	NAPC3	FILE	PA	ANT	DBT	PAC1	DETC1	FLU	PYR	PAC2	DETC2	DETC3	BAA	CHR	BBKF	BEP	BAP	PER	ICDP	DRAHA	BGHIP	DI	ΣΣ
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
00:001	Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Mean	209.00	158.50	21.50	107.00	15.00	10.00	143.50	19.00	162.50	125.50	21.50	25.00	77.50	135.50	440.50	161.00	102.50	54.00	124.50	25.00	106.00	523.00	
	St.dev	33.94	20.51	3.54	14.14	1.41	13.44	2.83	14.85	14.85	9.90	2.12	2.83	9.19	16.26	65.76	21.21	12.02	7.07	38.89	8.49	39.60	76.37	

Tab.width cont'd J99, 847, 900530.

Slice.Depth cm up:lower	PA	ΣΣ	PK	ΣΣ	PAHΣΣ	SPAH
	ppb	ppb	ppb	ppb	ppb	ppb
00:001	Count	2	2	2	2	2
	Mean	1997.00	770.00	2520.00	2495.0	
	St.dev	87.68	21.21	164.05	155.6	

Sample.area: J99 Undefined. All concentrations on Dry.weight basis.

Locality : 712, Latitude: 57°54.00N, Longitude: 10°27.00E
 Sample date: 900524, Sampling Lab: IMRN, Type: GS, Diameter: 100
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless ^{mm} then <63µm.

Slice.Depth cm up:lower	GSAMT %<63µ	CORG		Al	As	Cd	Cr	Cu	Hg	Ni	Pb	Zn	CB28	CB31	CB52	CB101	CB105	CB118	CB128	CB138	CB149	CB153	CB156	CB170
		ppt	ppt	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppt	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
00:001	Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Mean	95.00	17.00	45.650	14.7	0.090	78.10	20.45	0.07	30.55	28.10	0.095	0.31	0.21	0.12	0.27	0.20	0.30	0.14	0.44	0.23	0.36	<0.05	0.07
	St.dev	0.00	0.42	1.485	4.7	0.014	0.28	2.05	0.00	1.20	2.26	0.007	0.01	0.03	0.00	0.04	0.01	0.00	0.05	0.01	0.01	0.01	0.01	0.01

Tab.width cont'd J99, 547, 900425.

Slice.Depth cm up:lower	PA ΣΣ ppb	PK ΣΣ ppb	PAHΣΣ ppb	SPAH ppb
00:001	Count Mean St.dev	2 <<2.50 2.12	2 <<3.50 1.41	2 <<3.0 2.8

Sample.area: J99 Undefined. All concentrations on Dry.weight basis.

Locality : 551 , Latitude: 57°00.00N, Longitude: 08°16.00E
 Sample date: 900425 , Sampling Lab: IMRN, Type: GS, Diameter: 100
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless ^{μm} then <63μm.

Slice.Depth cm up:lower	GSAMT %<63μ	CORG ppt	Al ppt	As ppm	Cd ppm	Cr ppm	Cu ppm	Hg ppm	Ni ppm	Pb ppm	Zn ppt	CB28 ppb	CB31 ppb	CB52 ppb	CB101 ppb	CB105 ppb	CB118 ppb	CB128 ppb	CB138 ppb	CB149 ppb	CB153 ppb	CB156 ppb	CB170 ppb	
00:001	Count Mean St.dev	2 1.50 0.71	2 18.150 2.758	2 37.3 3.5	2 0.035 0.007	2 4.55 0.92	2 2.75 0.49	2 <<0.01 0.00	2 3.15 0.78	2 7.45 1.34	2 0.010 0.000	2 <<0.05 0.00	2 <<0.05 0.00	2 <<0.05 0.00	2 0.01 0.00	2 <<0.05 0.00	2 0.01 0.00	2 <<0.05 0.00	2 0.01 0.00	2 0.01 0.00	2 0.01 0.00	2 <<0.05 0.00	2 0.01 0.00	2 <<0.05 0.00

Tab.width cont'd J99, 551, 900425.

Slice.Depth cm up:lower	CB180 ppb	CB ΣΣ ppb	CB ΣΣ ppb	DDEBP ppb	DDEPP ppb	DDTBP ppb	DDTTP ppb	IDDEBP ppb	IDDEPP ppb	DD ΣΣ ppb	HCHA ppb	HCHG ppb	HC ΣΣ ppb	HCB ppb	ALD ppb	DIELD ppb	END ppb	TNOC ppb	ACDAN ppb	GODAN ppb	OCDAN ppb	NAP ppb	NAPCI ppb	
00:001	Count Mean St.dev	2 0.01 0.00	2 <<0.12 0.00	1 <<0.05 0.00	1 0.01 0.00	1 <<0.05 0.00	1 0.01 0.00	1 <<0.05 0.00	1 0.01 0.00	1 <<0.08 0.00	1 <<0.05 0.00	1 <<0.05 0.00	1 <<0.05 0.00	1 0.01 0.00	1 <<0.05 0.00	1 <<0.05 0.00	1 <<0.05 0.00	1 <<0.05 0.00	1 <<0.05 0.00	1 <<0.05 0.00	1 <<0.05 0.00	1 <<1.00 0.00	2 0.01 0.00	2 1.00 0.00

Tab.width cont'd J99, 551, 900425.

Slice.Depth cm up:lower	NAPC2 ppb	NAPC3 ppb	FILE ppb	PA ppb	ANT ppb	DBT ppb	PAC1 ppb	DBTC1 ppb	FLU ppb	PYR ppb	PAC2 ppb	DBTC2 ppb	DBTC3 ppb	BAA ppb	CHR ppb	BKF ppb	BEP ppb	BAP ppb	PER ppb	ICDP ppb	DBAHA ppb	BCHIP ppb	DI ΣΣ ppb	
00:001	Count Mean St.dev	2 2.00 0.00	2 1.50 0.71	2 <<1.00 0.00	2 <<1.00 0.00	2 <<1.00 0.00	2 1.00 0.00	2 <<1.00 0.00	2 1.00 0.00	2 <<1.00 0.00	2 1.00 0.00	2 <<1.00 0.00	2 <<1.00 0.00	2 <<1.00 0.00	2 <<1.00 0.00	2 2.00 0.00	2 1.00 0.00	2 <<1.00 0.00	2 1.00 0.00	2 1.00 0.00	2 1.00 0.00	2 1.00 0.00	2 1.00 0.00	2 <<5.50 0.71

Tab.width cont'd J99, 551, 900425.

Slice.Depth cm up:lower	PA ΣΣ ppb	PK ΣΣ ppb	PAHΣΣ ppb	SPAH ppb
00:001	Count Mean St.dev	2 <<9.00 0.00	2 <<4.00 0.00	2 <<13.50 0.71

Sample.area: J99 Undefined. All concentrations on Dry.weight basis.

Locality : 494 , Latitude: 56°30.00N, Longitude: 03°10.00E
 Sample date: 900420 , Sampling Lab: IMRN, Type: GS, Diameter: 100
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless ^{μm} then <63μm.

Slice.Depth cm up:lower	GSAMT %<63μ	CORG ppt	Al ppt	As ppm	Cd ppm	Cr ppm	Cu ppm	Hg ppm	Ni ppm	Pb ppm	Zn ppt	CB28 ppb	CB31 ppb	CB52 ppb	CB101 ppb	CB105 ppb	CB118 ppb	CB128 ppb	CB138 ppb	CB149 ppb	CB153 ppb	CB156 ppb	CB170 ppb
00:001	Count Mean St.dev	2 4.35 0.49	2 3.35 0.64	2 24.4 7.4	2 0.030 0.014	2 12.50 2.26	2 2.95 0.35	2 0.01 0.00	2 3.60 0.71	2 13.95 0.92	2 0.015 0.007	2 0.02 0.01	2 0.01 0.00	2 0.03 0.03	2 0.10 0.08	2 <<0.05 0.00	2 0.08 0.05	2 0.02 0.01	2 0.11 0.07	2 0.07 0.04	2 0.08 0.05	2 <<0.03 0.03	2 0.01 0.00

Tab.width cont'd J99, 494, 900420.

Slice.Depth cm up:lower	CB180 ppb	CB Σ7 ppb	CB ΣΣ ppb	DBEOP ppb	DEEPP ppb	DDIOP ppb	DDTTP ppb	TDIOP ppb	TDIOP ppb	TDIOP ppb	DD ΣΣ ppb	HCHA ppb	HCHG ppb	HC Σ3 ppb	HCBA ppb	ALD ppb	DIEKD ppb	END ppb	TNOC ppb	ACDAN ppb	GCDAN ppb	OCDDAN ppb	NAP ppb	NAPC1 ppb	
00:001	Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Mean	0.47	<0.64	0.03	0.05	<0.05	0.01	0.02	0.04	<0.18	<0.06	<0.03	<0.05	<0.01	0.01	<0.05	<0.03	<0.05	<0.05	<0.03	<0.05	<0.03	<0.03	<1.00	1.50
	St.dev	0.34	0.41	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.028	0.000	0.028	0.000	0.00	0.71

Tab.width cont'd J99, 494, 900420.

Slice.Depth cm up:lower	NAPC2 ppb	NAPC3 ppb	FILE ppb	PA ppb	ANT ppb	DBT ppb	PAC1 ppb	DBTC1 ppb	FLU ppb	PYR ppb	PAC2 ppb	DBTC2 ppb	DBTC3 ppb	BAA ppb	CHR ppb	BBKF ppb	BEP ppb	BAP ppb	PER ppb	ICDP ppb	DEAHA ppb	BGHIP ppb	DI ΣΣ ppb	
00:001	Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Mean	5.00	2.50	<1.00	3.50	<1.00	3.50	<1.00	5.50	4.50	5.00	1.00	1.00	1.50	4.50	39.00	14.00	5.50	1.00	25.00	2.00	2.00	22.50	<10.00
	St.dev	1.41	0.71	0.71	0.00	0.00	0.71	0.00	0.71	0.71	0.00	0.00	0.00	0.71	0.71	14.14	5.66	0.71	12.73	1.41	1.41	13.44	2.83	

Tab.width cont'd J99, 494, 900420.

Slice.Depth cm up:lower	PA ΣΣ ppb	PK ΣΣ ppb	PAHΣΣ ppb	SPAH ppb
00:001	Count	2	2	2
	Mean	<<140.00	73.00	<<149.00
	St.dev	49.50	28.28	52.33

Sample.area: J99 Undefined. All concentrations on Dry weight basis.

Locality : 532 , Latitude: 56°30.00N, Longitude: 05°11.00E
 Sample date: 900424 , Sampling Lab: IMRN, Type: GS, Diameter: 100
 Est. sedimentation rate 001 mm/year. Unfractionated sample unless noted then <63µm.

Slice.Depth cm up:lower	GSAMT ppb	CORG ppb	Al ppm	As ppm	Cd ppm	Cr ppm	Cu ppm	Hg ppm	Ni ppm	Pb ppm	Zn ppm	CB28 ppb	CB31 ppb	CB52 ppb	CB101 ppb	CB105 ppb	CB118 ppb	CB128 ppb	CB138 ppb	CB149 ppb	CB153 ppb	CB156 ppb	CB170 ppb	
00:001	Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Mean	10.00	2.80	20.200	34.9	0.035	31.35	<0.01	5.30	14.75	0.020	<0.03	<0.03	0.01	0.02	<0.05	0.02	<0.05	0.03	0.02	0.02	0.02	<0.04	<0.03
	St.dev	0.00	0.42	0.141	7.2	0.021	8.70	0.00	0.71	1.06	0.000	0.03	0.03	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.03

Tab.width cont'd J99, 532, 900424.

Slice.Depth cm up:lower	CB180 ppb	CB Σ7 ppb	CB ΣΣ ppb	DBEOP ppb	DEEPP ppb	DDIOP ppb	DDTTP ppb	TDIOP ppb	TDIOP ppb	TDIOP ppb	DD ΣΣ ppb	HCHA ppb	HCHG ppb	HC Σ3 ppb	HCBA ppb	ALD ppb	DIEKD ppb	END ppb	TNOC ppb	ACDAN ppb	GCDAN ppb	OCDDAN ppb	NAP ppb	NAPC1 ppb
00:001	Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Mean	0.01	<0.13	0.01	0.04	<0.05	0.02	<0.03	0.02	<0.14	<0.03	0.01	0.01	0.00	0.01	<0.05	0.01	<0.03	<0.05	<0.05	<0.05	<0.05	1.00	4.00
	St.dev	0.00	0.04	0.00	0.01	0.00	0.01	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.000	0.000	0.000	0.000	0.00	0.00

Tab.width cont'd J99, 532, 900424.

Slice.Depth cm up:lower	NAPC2 ppb	NAPC3 ppb	FILE ppb	PA ppb	ANT ppb	DBT ppb	PAC1 ppb	DBTC1 ppb	FLU ppb	PYR ppb	PAC2 ppb	DBTC2 ppb	DBTC3 ppb	BAA ppb	CHR ppb	BBKF ppb	BEP ppb	BAP ppb	PER ppb	ICDP ppb	DEAHA ppb	BGHIP ppb	DI ΣΣ ppb	
00:001	Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Mean	10.00	6.00	<1.00	3.50	<1.00	6.00	<1.00	6.50	4.00	8.00	1.00	1.00	3.50	6.00	23.00	8.00	4.00	1.50	12.00	1.00	1.00	12.00	21.00
	St.dev	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.71	1.41	1.41	0.00	0.00	0.71	0.00	0.00	0.00	1.41	0.00

NIVA



Norwegian Institute for Water Research
P.O.Box 173, Kjelsås N-0411 Oslo, Norway
Phone: + 47 22 18 51 00 Fax: + 47 22 18 52 00
ISBN-82-577-2585-4