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Guardians of the Water Environment
Diogelwyr Amgylchedd Dŵr

GUIDELINES ON STATUTORY RETURNS:

DANGEROUS SUBSTANCES DIRECTIVE

1) LIST 1 SUBSTANCES

This document has been produced by Strategic Planning at St.Mellons. Further copies can be obtained from Jane Patey in Strategic Planning.

ENVIRONMENT AGENCY
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DANGEROUS SUBSTANCES DIRECTIVE

LIST 1 SUBSTANCES

INTRODUCTION

EC Directive 76/464/EEC of 4th May 1976 concerns pollution caused by certain dangerous substances discharged into the environment. This lists two groups of chemicals, with the first list - the List 1, comprising a group of dangerous substances selected mainly on the basis of their toxicity, persistence and bioaccumulation. The second group, the List 2, are substances that can also have a deleterious effect on the aquatic environment but which are confined to a given area and are dependent on the characteristics and location of the receiving waters. These however, will be the subject of a separate document.

Member states are charged with taking steps to eliminate pollution by List 1 chemicals, where pollution is defined as "the discharge by man, directly or indirectly, of substances or energy into the aquatic environment, the results of which are such as to cause hazards to human health, harm to living resources and to aquatic ecosystems, damage to amenities or interference with other legitimate uses of water".

The Government has issued Circular 7/89/DOE(16/89 WO) on the implementation of controls on List 1 and List 2 substances. This document summarises the requirements in relation to Welsh Region. In accordance with section 104 of the Water Act 1989 The Surface Waters (Dangerous Substances) (Regulations) 1989 S.I.2286 were passed by Parliament in December 1989 and became effective from January 1st 1990. The Regulations repeat the EQSs set in the Daughter Directives with two exceptions: These are for cadmium and mercury for which standards more stringent than those stated in the Directives have been introduced. The "competent authority" charged with the responsibility for the implementation of the Directives is the National Rivers Authority and will be referred to as the "Authority".

Monitoring of Discharges

For each List 1 substance, the Authority has to ensure that the emission standards specified in consents are not exceeded, and to monitor the effect of discharges on the aquatic environment. This involves, for each consented discharge of a List 1 substance, sampling the receiving waters in order to demonstrate that the quality standard is being met, with sampling being "sufficiently close to the discharge point to be representative of the aquatic environment in the area affected by the discharge". Monitoring programmes are submitted to the DOE/WO.

In addition to monitoring the receiving waters of a discharge the discharge itself must be monitored. Although these results are not required by DOE on an annual basis they must be collected in order to demonstrate the degree of compliance with the consent.

It is the responsibility of the Authority to effect continuing reduction in discharges of List 1 substances.

Environmental Monitoring

The actual details of monitoring programmes vary between the directives but must be undertaken for all List 1 substances. The degree of monitoring is at the discretion of the Authority but must include monitoring at the tidal limit of all significant estuaries (ie Harmonised Monitoring sites). Other monitoring should be "background monitoring in rivers, estuaries and (where appropriate) coastal waters where these substances are thought most likely to be detected in significant concentrations in relation to the relevant quality standards." The background monitoring takes place at what will be referred to as National Network Sites and comprises the Harmonised Monitoring sites, an estuary site and a territorial water site.

Submission of Returns

The Authority has to submit the following returns:-

Initially (following notification of a new directive)

- a) a list of discharges (including those to sewer) for each substance and plans for monitoring the receiving waters.
- b) a list of all authorisations granted (eg discharge consent conditions) showing the emission standards.

Subsequently (on an annual basis except where otherwise directed)

- c) details of any non complying discharges together with an explanation of proposed action for ensuring compliance.
- d) details of any changes or new authorisations.

and either (if using EQS's)

- e) data confirming that the EQS's are being met and
- f) where appropriate data for sediments and/or molluscs and/or shellfish and/or fish.

or (if limit values are used)

g) the results of the monitoring of compliance with emission standards

and (in either case)

h) the results of the general environmental monitoring.

Where EQS's are used the following information must also be submitted to the DOE/WO on an annual basis:-

the points of discharge and the means of dispersal
the area in which the EQS is applied
the location of sampling points
the frequency of sampling
the methods of sampling and measurement
the results obtained.

Where it cannot be demonstrated that an EQS is being met the Authority must supply a detailed explanation of the reasons for this together with the measures it proposes to take in order to ensure compliance in future years. This should take the form of either a plan of actions designed to ensure compliance in the near future or, a proposal to apply a limit value. In either case the Authority should consult with the DOE/WO when it becomes apparent that an EQS has not been met.

Where EQSs are not specified for background environmental monitoring (National Network Monitoring) then a "standstill" provision applies. This requires that the parameters concerned should not show deterioration in quality over a number of years taking into account recognised statistical variation.

Reporting of Information

Information is reported on forms supplied by DOE. Copies of these forms are shown in Appendix 1. Forms A to D should be completed and submitted when a new directive comes into force and only submitted subsequently when a change to this information occurs. Forms A and B should be completed with information supplied by Dwr Cymru as they relate to discharges going to sewers. Forms E to H should be submitted annually when monitoring has taken place. If a List 1 substance has no known discharge only background monitoring (National Network Monitoring) is required and so submission of form G alone is sufficient. If a discharge exists for a List 1 substance then the further required monitoring is reported on forms E and F (and H where quality objectives cannot initially be achieved and emission limit values are set).

To facilitate data retrieval a macro (JDPHMLIST1) has been set up on the VME system to provide the results of monitoring at Harmonised Monitoring sites. The remaining data is retrieved by sample point number for the determinands listed in this document.

SUMMARY OF IMPLEMENTATION DATES OF DANGEROUS SUBSTANCES DIRECTIVE AND DAUGHTER DIRECTIVES

DIRECTIVE	CHEMICAL	IMPLEMENTED
76/464/EEC	Pollution caused by Dangerous Substances	May 1976
82/176/EEC	Mercury discharges by Chloro-alkali electrolysis industry	July 1983
84/156/EEC	Mercury discharges by other sections	March 1986
83/513/EEC	Cadmium	April 1986
84/491/EEC	Hexachlorocyclohexane (HCH)	April 1986
86/280/EEC	Carbon Tetrachloride (CTC)	January 1988
86/280/EEC	DDT	January 1988
86/280/EEC	Pentachlorophenol	January 1988
86/280/EEC & 88/347/EEC	Drins (Aldrin, Dieldrin, Endrin and Isodrin)	January 1988
86/280/EEC & 88/347/EEC	Hexachlorobenzene (HCB)	January 1990
86/280/EEC & 88/347/EEC	Hexachlorobutadiene (HCBd)	January 1990
86/280/EEC & 88/347/EEC	Chloroform	January 1990

SAMPLING POINTS FOR NATIONAL NETWORK RIVER MONITORING

Sampling for all List 1 substances must be carried out monthly at the Harmonised Monitoring Sites. The sample points for these sites with their grid references are listed below.

South East

50032	R Wye at Redbrook Railway Bridge	SO 5360 0982
50022	R Wye at Bridge Sollars	SO 4124 4242
50009	R Elan at Glyn Footbridge	SN 9656 6565
40970	R Usk, Chain Bridge	SO 3464 0558
40130	Afon Lwyd, Ponthir Weir	ST 3300 9242
40430	R Ebbw, Rhiwderin Gauging Station	ST 2587 8887
18001	R Rhymney at Llanrhymney	ST 2141 8074
17001	R Taff at Blackweir, Cardiff	ST 1708 7808
16001	R Ely at St Fagans (U/S St Fagans Gauging Station)	ST 1194 7696

South West

13001	R Ogmore at Merthyr Mawr Dipping Bridge	SS 8910 7839
10004	R Neath D/S Aberdulais Gauging Station	SS 7715 9891
30001	R Tawe, Morrision Rd Bridge, Swansea	SS 6740 9790
30401	R Loughor above Ynys Llwchwr Gauging Station	SN 6176 0888
31601	R Towy, Nantgaredig nr Carmarthen	SN 4910 2040
32001	R Taf, Clog Y Fran Gauging Station	SN 2380 1606
32401	E Cleddau, Canaston Gauging Station	SN 0720 1530
32803	W Cleddau, Prendergast Gauging Station	SM 9540 1770
34401	R Teify, Llechryd Rd Bridge	SN 2180 4364
82002	R Ystwyth at Rhydyfelin Rd Bridge	SN 5880 7880
35201	R Rheidol, Penybont Bridge	SN 5943 8033

North

20001	R Dovey, A487 Rd Bridge, Machynlleth	SH 7440 0193
20002	R Dysynni, Pont Y Garth, Llanegryn	SH 6357 0707
20004	R Wnion, A 470 Rd Bridge, Dolgellau	SH 7285 1802
20003	R Mawddach, Ty'n Y Groes Hotel Bridge, Ganllwyn	SH 7297 2337
22502	R Dwyryd, A470 Rd Bridge, Maentwrog	SH 6648 4076
22503	R Glaslyn, Pont Croesor, Prenteg	SH 5930 4136
22501	R Dwyfawr, Old Dolbenmaen Bridge, Garndolbenmaen	SH 5074 4298
22504	R Gwyrfai, A487 Rd Bridge, Bontnewydd, Caernarfon	SH 4828 5986
22505	R Ogwen, Felin Cochwillan Bridge, Talybont, Bangor	SH 6013 6995
25001	R Conwy, Railway Bridge, nr Cwm Llanerch Farm, Betws y Coed	SH 8017 5948
8	R Elwy at Gipsy Lane	SJ 0320 7603
7	R Clwyd, Pont Dafydd, St Asaph	SJ 0442 7482
3	R Dee at Iron Bridge	SJ 4180 6010
1	R Dee at Llanderfel Bridge	SH 9820 3661
2	R Dee at Overton Bridge	SJ 3542 4270
4	R Alwen at Glan Alwen Fords	SJ 0582 4285
5	R Clewedog at Pickhill Bridge	SJ 3964 4821
6	R Alyn at Ithell's Bridge	SJ 3902 5623

LIST 1 REQUIREMENTS

Cadmium

1.1 Directive No. 83/513/EEC

This directive came into force on 1 April 1986.

1.2 Submission of monitoring data to DOE: Annually by 31 March for preceding calendar year.

2 DISCHARGE MONITORING

Frequency of sampling: Monthly

<u>Sampling sites:</u>	17095	Cynon Valley STW	ST 0813 9300
	68024	Cardiff Eastern - Roath Sewer	ST 21860 76755
	68025	Cardiff Eastern - Rover Way Sewer	ST 21860 76750
	16062	Cardiff Western PS, Penarth Road	ST 1680 7377
	68000	Cardiff Eastern PS - Sludge Disposal Point	ST 2185 7667
	(70513	Mechema Chemicals, Port Talbot	SS 7585 8902
* under review	(11009	Mechema - Associated British Ports sewer outlet	SS 7553 8917
	(

Determinands used: total cadmium - det. code 253 (mg/l)

ARG used: ED01

These results are not submitted to DOE but are required for assessment of the degree of compliance with the consent.

* Mechema consent under review. Discharge and EQS monitoring programmes will be set up as necessary and this document be suitably amended.

3.1 EOS COMPLIANCE - RIVERS (affected by a discharge)

Frequency of sampling: Monthly

Sampling sites: 17004 R Taff at Upper Boat ST 1053 8700
68323 R Taff 1km downstream of ST 0850 9200
Cynon Valley Sewage Treatment
Works

EQS : 5.0 ug/l total cadmium (annual mean)

Determinands used: total cadmium - det. code 108 (ug/l)

ARG used: EF02

These results are submitted to DOE on Form E.

3.2 EOS COMPLIANCE - ESTUARIES (affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling sites: 90005 Goldcliff ST 375 800
90006 Uskmouth No.1 Bouy ST 325 815
90007 Opposite Peterstone Gout ST 276 792
between Rhymney Valley Trunk
Sewer & Western Valley Trunk
Sewer
90008 Rhymney ST 225 740
90009 Cardiff Flats ST 275 725
90010 Lavernock Point ST 198 685

EQS : 2.5 ug/l dissolved cadmium (annual mean)

The Directive states an EQS of 5 ug/l but UK Regulations
1989 specify the more stringent standard of 2.5 ug/l.

Determinands used: dissolved cadmium - det. code 106 (ug/l)

ARG used: EE01

These results are submitted to DOE on Form E (Quality Standards
in Water).

3.3 EQS COMPLIANCE - SEAS (affected by a discharge)

None in Wales

3.4 EOS COMPLIANCE - RIVER SEDIMENT (affected by a discharge)

Frequency of sampling: 1 sample per year

Sampling sites: 17004 R Taff sediment at Upper Boat ST 1053 8700
(LT 63um fraction)
68323 R Taff sediment below ST 0850 9200
Cilfynydd STW (LT 63um
fraction)

EOS : The concentration of cadmium in sediments must not increase significantly with time.

Determinands used: cadmium - det. code 254 (mg/kg dry wt)

ARG used: EC01

These results are submitted to DOE on Form F (Sediments/Shellfish).

3.5 EOS COMPLIANCE - SHELLFISH (affected by a discharge)

Frequency of sampling: 1 sample per year (set of 50 Mytilus edulis)

Sampling site: 19103 Witch's Point, Southerndown SS 8840 7260

EOS : The concentration of cadmium in shellfish must not increase significantly with time.

Determinands used: total cadmium - det. code 1254 (mg/kg wet wt)

ARG used: EX01

These results are submitted to DOE on Form F.

4.1 NATIONAL NETWORK MONITORING - RIVERS (not affected by a discharge)

Frequency of sampling: monthly

Sampled at: All Harmonised Monitoring sites (from January 1990).

EOS : 1 ug/l total cadmium (annual mean)

Determinands used: total cadmium - det. code 108 (ug/l)

ARG used: UF02

These results are submitted to DOE on Form G (Environmental monitoring).

4.2 NATIONAL NETWORK MONITORING - ESTUARIES (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 74054 SEJC Centre Channel Site no.1 SS 909 585
(Centre of line between Nash Point & Hurlestone Point)

EQS : 1 ug/l dissolved cadmium (annual mean)

Determinands used: dissolved cadmium - det. code 106 (ug/l)

ARG used: EE01 - to be ammended when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

4.3 NATIONAL NETWORK MONITORING - SEA (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 39140 Musselwick Sands SM 785 090

EQS : 0.5 ug/l dissolved cadmium (annual mean)

Determinands used: dissolved cadmium - det. code 106 (ug/l)

ARG used: EE01 - to be ammended when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

- 5 Pollution Control should notify the Senior Environmental Regulations Scientist immediately if a discharge changes or a new one commences in his area. If this occurs further monitoring will be necessary and a sampling programme will be set up.

A draft copy of each year's return will be circulated to Pollution Control Managers for comments, to provide reasons for failing to achieve EQSs and to update the inventories of discharges, prior to submission to DOE.

A copy of the final version of the return will be circulated to Pollution Control Managers for information and to note any missing data, for rectification in the following year's monitoring programme.

A copy will also be sent to the Senior Environmental Regulations Scientist.

Hexachlorocyclohexane (sum of alpha, beta, gamma and delta HCH) *

1.1 Directive No. 84/491/EEC

This directive came into force on 1 April 1986.

1.2 Submission of monitoring data to DOE: Annually by 31 March for preceding calendar year.

No known discharges of HCH exist in Wales so National Network Monitoring is all that is required.

4.1 NATIONAL NETWORK MONITORING - RIVERS (Waters not affected by a discharge)

Frequency of sampling: monthly

Sampled at: All Harmonised Monitoring sites.

Total HCH is a calculated determinand, using the sum of alpha, beta, and gamma and delta HCH.

EOS : 50 ng/l total HCH (annual mean)

Determinands used:

- total HCH - det. code 9836 (ug/l)
- alpha HCH - det. code 487 (ug/l)
- beta HCH - det. code 491 (ug/l)
- gamma HCH - det. code 499 (ug/l)
- * delta HCH - det. code 495 (ug/l)

ARG used: UF02

These results are submitted to DOE on Form G (Environmental monitoring).

* delta HCH not analysed for therefore total HCH calculated using alpha, beta and gamma HCH only

4.2 NATIONAL NETWORK MONITORING - ESTUARIES (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 74054 SEJC Centre Channel Site no.1 SS 909 585
(Centre of line between Nash Point & Hurlestone Point)

EOS : Not specified so a "standstill" provision applies.

Determinands used: total HCH - det. code 9836 (ug/l)
alpha HCH - det. code 487 (ug/l)
beta HCH - det. code 491 (ug/l)
gamma HCH - det. code 499 (ug/l)
* delta HCH - det. code 495 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

4.3 NATIONAL NETWORK MONITORING - SEA (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 39140 Musselwick Sands SM 785 090

EOS : Not specified so a "standstill" provision applies.

Determinands used: total HCH - det. code 9836 (ug/l)
alpha HCH - det. code 487 (ug/l)
beta HCH - det. code 491 (ug/l)
gamma HCH - det. code 499 (ug/l)
* delta HCH - det. code 495 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

* delta HCH not analysed for therefore total HCH calculated using alpha, beta and gamma HCH only

- 5 Pollution Control should notify the Senior Environmental Regulations Scientist immediately if a discharge commences or changes in his area. If this occurs further monitoring will be necessary and a sampling programme will be set up.

A draft copy of each year's return will be circulated to Pollution Control Managers for comments, to provide reasons for failing to achieve EQSs and to update the inventories of discharges, prior to submission to DOE.

A copy of the final version of the return will be circulated to Pollution Control Managers for information and to note any missing data, for rectification in the following year's monitoring programme.

A copy will also be sent to the Senior Environmental Regulations Scientist.

Sampling specified in 4.2 and 4.3 is not required until the programme for National Network estuary and sea monitoring for all List 1 substances is set up. At that time the location of the National Network sea site may be altered.

Mercury

- 1.1 Directive No. 82/176/EEC (chlor-alkali industry)
84/156/EEC (non chlor-alkali industry)

Directive 82/176/EEC came into force on 1 July 1983.
Directive 84/156/EEC came into force on 12 March 1986.

- 1.2 Submission of monitoring data to DOE: Annually by 31 March for preceding calendar year.

No known discharges of mercury exist in Wales so National Network Monitoring is all that is required.

- 4.1 NATIONAL NETWORK MONITORING - RIVERS (Waters not affected by a discharge)

Frequency of sampling: monthly

Sampled at: All Harmonised Monitoring sites.

EQS : Not specified so a "standstill" provision applies.

Determinands used: total mercury - det. code 105 (ug/l)

ARG used: UF02

These results are submitted to DOE on Form G (Environmental monitoring).

- 4.2 NATIONAL NETWORK MONITORING - ESTUARIES (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 74054 SEJC Centre Channel Site no.1 SS 909 585
(Centre of line between Nash Point & Hurlestone Point)

EQS : Not specified so a "standstill" provision applies.

Determinands used: dissolved mercury - det. code 103 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

4.3 NATIONAL NETWORK MONITORING - SEA (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 39140 Musselwick Sands

SM 785 090

EOS : Not specified so a "standstill" provision applies.

Determinands used: dissolved mercury - det. code 103 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

- 5 Pollution Control should notify the Senior Environmental Regulations Scientist immediately if a discharge commences or changes in his area. If this occurs further monitoring will be necessary and a sampling programme will be set up.

A draft copy of each year's return will be circulated to Pollution Control Managers for comments, to provide reasons for failing to achieve EQSs and to update the inventories of discharges, prior to submission to DOE.

A copy of the final version of the return will be circulated to Pollution Control Managers for information and to note any missing data, for rectification in the following year's monitoring programme.

A copy will also be sent to the Senior Environmental Regulations Scientist.

Sampling specified in 4.2 and 4.3 is not required until the programme for National Network estuary and sea monitoring for all List 1 substances is set up. At that time the location of the National Network sea site may be altered.

PP DDT

1.1 Directive No. 86/280/EEC

This directive came into force on 1 January 1988.

1.2 Submission of monitoring data to DOE: Annually by 30 April for preceding calendar year.

No known discharges of PP DDT exist in Wales so National Network Monitoring is all that is required.

4.1 NATIONAL NETWORK MONITORING - RIVERS (Waters not affected by a discharge)

Frequency of sampling: monthly

Sampled at: All Harmonised Monitoring sites.

EOS : A "standstill" provision applies.

Determinands used: PP DDT - det. code 555 (ug/l)

ARG used: UF02

These results are submitted to DOE on Form G (Environmental monitoring).

4.2 NATIONAL NETWORK MONITORING - ESTUARIES (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 74054 SEJC Centre Channel Site no.1 SS 909 585
(Centre of line between Nash Point & Hurlestone Point)

EOS : A "standstill" provision applies.

Determinands used: total PP DDT - det. code 555 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

4.3 NATIONAL NETWORK MONITORING - SEA (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 39140 Musselwick Sands

SM 785 090

EOS : A "standstill" provision applies.

Determinands used: total PP DDT - det. code 555 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

- 5 Pollution Control should notify the Senior Environmental Regulations Scientist immediately if a discharge commences or changes in his area. If this occurs further monitoring will be necessary and a sampling programme will be set up.

A draft copy of each year's return will be circulated to Pollution Control Managers for comments, to provide reasons for failing to achieve EQSs and to update the inventories of discharges, prior to submission to DOE.

A copy of the final version of the return will be circulated to Pollution Control Managers for information and to note any missing data, for rectification in the following year's monitoring programme.

A copy will also be sent to the Senior Environmental Regulations Scientist.

Sampling specified in 4.2 and 4.3 is not required until the programme for National Network estuary and sea monitoring for all List 1 substances is set up. At that time the location of the National Network sea site may be altered.

Total DDT (sum of PP DDT, OP DDT and PP DDE)

1.1 Directive No. 86/280/EEC

This directive came into force on 1 January 1988.

1.2 Submission of monitoring data to DOE: Annually by 30 April for preceding calendar year.

No known discharges of total DDT exist in Wales so National Network Monitoring is all that is required.

4.1 NATIONAL NETWORK MONITORING - RIVERS (not affected by a discharge)

Frequency of sampling: monthly

Sampled at: All Harmonised Monitoring sites.

EQS : A "standstill" provision applies.

Total DDT is a calculated determinand using the sum of:
1,1,1 trichloro-2,2 bis(p-chlorophenyl)ethane
1,1,1 trichloro-2(o-chlorophenyl)-2-(p-chlorophenyl)ethane
1,1,1 dichloro-2,2 bis(p-chlorophenyl)ethylene
and 1,1,1 dichloro-2,2 bis(p-chlorophenyl)ethane

Determinands used: total DDT - det. code 575 (ug/l)
PP DDT - det. code 555 (ug/l)
OP DDT - det. code 539 (ug/l)
PP DDE - det. code 551 (ug/l)

ARG used: UF02

These results are submitted to DOE on Form G (Environmental monitoring).

4.2 NATIONAL NETWORK MONITORING - ESTUARIES (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 74054 SEJC Centre Channel Site no.1 SS 909 585
(Centre of line between Nash Point & Hurlestone Point)

EOS : A "standstill" provision applies.

Determinands used: total DDT - det. code 575 (ug/l)
PP DDT - det. code 555 (ug/l)
OP DDT - det. code 539 (ug/l)
PP DDE - det. code 551 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

4.3 NATIONAL NETWORK MONITORING - SEA (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 39140 Musselwick Sands SM 785 090

EOS : A "standstill" provision applies.

Determinands used: total DDT - det. code 575 (ug/l)
PP DDT - det. code 555 (ug/l)
OP DDT - det. code 539 (ug/l)
PP DDE - det. code 551 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

- 5 Pollution Control should notify the Senior Environmental Regulations Scientist immediately if a discharge commences or changes in his area. If this occurs further monitoring will be necessary and a sampling programme will be set up.

A draft copy of each year's return will be circulated to Pollution Control Managers for comments, to provide reasons for failing to achieve EQSs and to update the inventories of discharges, prior to submission to DOE.

A copy of the final version of the return will be circulated to Pollution Control Managers for information and to note any missing data, for rectification in the following year's monitoring programme.

A copy will also be sent to the Senior Environmental Regulations Scientist.

Sampling specified in 4.2 and 4.3 is not required until the programme for National Network estuary and sea monitoring for all List 1 substances is set up. At that time the location of the National Network sea site may be altered.

Carbon Tetrachloride

1.1 Directive No. 86/280/EEC

This directive came into force on 1 January 1988.

1.2 Submission of monitoring data to DOE: Annually by 30 April for preceding calendar year.

No known discharges of carbon tetrachloride exist in Wales so National Network Monitoring is all that is required.

4.1 NATIONAL NETWORK MONITORING - RIVERS (not affected by a discharge)

Frequency of sampling: monthly

Sampled at: All Harmonised Monitoring sites.

EOS : Not specified so a "standstill" provision applies.

Determinands used: tot. carbon tetrachloride-det. code 9698 (ug/l)

ARG used: UF02

These results are submitted to DOE on Form G (Environmental monitoring).

4.2 NATIONAL NETWORK MONITORING - ESTUARIES (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 74054 SEJC Centre Channel Site no.1 SS 909 585
(Centre of line between Nash Point & Hurlestone Point)

EOS : Not specified so a "standstill" provision applies.

Determinands used: tot. carbon tetrachloride-det. code 9698 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

4.3 NATIONAL NETWORK MONITORING - SEA (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 39140 Musselwick Sands

SM 785 090

EOS : Not specified so a "standstill" provision applies.

Determinands used: tot. carbon tetrachloride-det. code 9698 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

- 5 Pollution Control should notify the Senior Environmental Regulations Scientist immediately if a discharge commences or changes in his area. If this occurs further monitoring will be necessary and a sampling programme will be set up.

A draft copy of each year's return will be circulated to Pollution Control Managers for comments, to provide reasons for failing to achieve EQSs and to update the inventories of discharges, prior to submission to DOE.

A copy of the final version of the return will be circulated to Pollution Control Managers for information and to note any missing data, for rectification in the following year's monitoring programme.

A copy will also be sent to the Senior Environmental Regulations Scientist.

Sampling specified in 4.2 and 4.3 is not required until the programme for National Network estuary and sea monitoring for all List 1 substances is set up. At that time the location of the National Network sea site may be altered.

Pentachlorophenol

1.1 Directive No. 86/280/EEC

This directive came into force on 1 January 1988.

1.2 Submission of monitoring data to DOE: Annually by 30 April for preceding calendar year.

No known discharges of pentachlorophenol exist in Wales so National Network Monitoring is all that is required.

4.1 NATIONAL NETWORK MONITORING - RIVERS (not affected by a discharge)

Frequency of sampling: monthly

Sampled at: All Harmonised Monitoring sites.

EOS: Not specified so a "standstill" provision applies.

Determinands used: pentachlorophenol - det. code 1085 (ug/l)

ARG used: UF02

These results are submitted to DOE on Form G (Environmental monitoring).

4.2 NATIONAL NETWORK MONITORING - ESTUARIES (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 74054 SEJC Centre Channel Site no.1 SS 909 585
(Centre of line between Nash Point & Hurlestone Point)

EOS: Not specified so a "standstill" provision applies.

Determinands used: pentachlorophenol - det. code 1085 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

4.3 NATIONAL NETWORK MONITORING - SEA (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 39140 Musselwick Sands SM 785 090

EOS : Not specified so a "standstill" provision applies.

Determinands used: pentachlorophenol - det. code 1085 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

- 5 Pollution Control should notify the Senior Environmental Regulations Scientist immediately if a discharge commences or changes in his area. If this occurs further monitoring will be necessary and a sampling programme will be set up.

A draft copy of each year's return will be circulated to Pollution Control Managers for comments, to provide reasons for failing to achieve EQSS and to update the inventories of discharges, prior to submission to DOE.

A copy of the final version of the return will be circulated to Pollution Control Managers for information and to note any missing data, for rectification in the following year's monitoring programme.

A copy will also be sent to the Senior Environmental Regulations Scientist.

Sampling specified in 4.2 and 4.3 is not required until the programme for National Network estuary and sea monitoring for all List 1 substances is set up. At that time the location of the National Network sea site may be altered.

Endrin

1.1 Directive No. 86/280/EEC and 88/347/EEC

These directives came into force on 1 January 1989.

1.2 Submission of monitoring data to DOE: Annually by 31 March for preceding calendar year.

No known discharges of endrin exist in Wales so National Network monitoring is all that is required.

4.1 NATIONAL NETWORK MONITORING - RIVERS (not affected by a discharge)

Frequency of sampling: monthly

Sampled at: All Harmonised Monitoring sites.

EOS : Not specified so a "standstill" provision applies.

Determinands used: endrin - det. code 562 (ug/l)

ARG used: UF02

These results are submitted to DOE on Form G (Environmental monitoring).

4.2 NATIONAL NETWORK MONITORING - ESTUARIES (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 74054 SEJC Centre Channel Site no.1 SS 909 585
(Centre of line between Nash Point & Hurlestone Point)

EOS : Not specified so a "standstill" provision applies.

Determinands used: endrin - det. code 562 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

4.3 NATIONAL NETWORK MONITORING - SEA (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 39140 Musselwick Sands

SM 785 090

EQS : Not specified so a "standstill" provision applies.

Determinands used: endrin - det. code 562 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

- 5 Pollution Control should notify the Senior Environmental Regulations Scientist immediately if a discharge commences or changes in his area. If this occurs further monitoring will be necessary and a sampling programme will be set up.

A draft copy of each year's return will be circulated to Pollution Control Managers for comments, to provide reasons for failing to achieve EQSs and to update the inventories of discharges, prior to submission to DOE.

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A copy will also be sent to the Senior Environmental Regulations Scientist.

Sampling specified in 4.2 and 4.3 is not required until the programme for National Network estuary and sea monitoring for all List 1 substances is set up. At that time the location of the National Network sea site may be altered.

Total "Drins" (sum of aldrin, dieldrin, endrin and isodrin)

1.1 Directive No. 86/280/EEC and 88/347/EEC

These directives came into force on 1 January 1989.

1.2 Submission of monitoring data to DOE: Annually by 31 March for preceding calendar year.

No known discharge of the "drins" exists in Wales so National Network Monitoring is all that is required.

4.1 NATIONAL NETWORK MONITORING - RIVERS (not affected by a discharge)

Frequency of sampling: monthly

Sampled at: All Harmonised Monitoring sites.

EOS : Not specified so a "standstill" provision applies.

Total "drins" is a calculated determinand using the sum of endrin, aldrin, dieldrin and isodrin.

Determinands used: total "drins" - det. code 9570 (ug/l)
endrin - det. code 562 (ug/l)
aldrin - det. code 483 (ug/l)
dieldrin - det. code 511 (ug/l)
isodrin - det. code 9697 (ug/l)

ARG used: UF02

These results are submitted to DOE on Form G (Environmental monitoring).

4.2 NATIONAL NETWORK MONITORING - ESTUARIES (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 74054 SEJC Centre Channel Site no.1 SS 909 585
(Centre of line between Nash Point & Hurlestone Point)

EOS : Not specified so a "standstill" provision applies.

Determinands used: total "drins" - det. code 9570 (ug/l)
endrin - det. code 562 (ug/l)
aldrin - det. code 483 (ug/l)
dielddrin - det. code 511 (ug/l)
isodrin - det. code 9697 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

4.3 NATIONAL NETWORK MONITORING - SEA (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 39140 Musselwick Sands SM 785 090

EOS : Not specified so a "standstill" provision applies.

Determinands used: total "drins" - det. code 9570 (ug/l)
endrin - det. code 562 (ug/l)
aldrin - det. code 483 (ug/l)
dielddrin - det. code 511 (ug/l)
isodrin - det. code 9697 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up

These results are submitted to DOE on Form G.

- 5 Pollution Control should notify the Senior Environmental Regulations Scientist immediately if a discharge commences or changes in his area. If this occurs further monitoring will be necessary and a sampling programme will be set up.

A draft copy of each year's return will be circulated to Pollution Control Managers for comments, to provide reasons for failing to achieve EQSs and to update the inventories of discharges, prior to submission to DOE.

A copy of the final version of the return will be circulated to Pollution Control Managers for information and to note any missing data, for rectification in the following year's monitoring programme.

A copy will also be sent to the Senior Environmental Regulations Scientist.

Sampling specified in 4.2 and 4.3 is not required until the programme for National Network estuary and sea monitoring for all List 1 substances is set up. At that time the location of the National Network sea site may be altered.

Aldrin

1.1 Directive No. 86/280/EEC and 88/347/EEC

1.2 Submission of inventories of discharges to DOE: By 31 March 1990.

Commencement of sampling: January 1994

Submission of monitoring data to DOE: By 31 March 1995 then annually for preceding calendar year.

No known discharges of aldrin exist in Wales so National Network Monitoring is all that is required

4.1 NATIONAL NETWORK MONITORING - RIVERS (not affected by a discharge)

Frequency of sampling: monthly

Sampled at: All Harmonised Monitoring sites.

EOS : Not specified so a "standstill" provision applies.

Determinands used: aldrin - det. code 483 (ug/l)

ARG used: UF02

These results are submitted to DOE on Form G (Environmental monitoring).

4.2 NATIONAL NETWORK MONITORING - ESTUARIES (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 74054 SEJC Centre Channel Site no.1 SS 909 585
(Centre of line between Nash Point & Hurlestone Point)

EOS : Not specified so a "standstill" provision applies.

Determinands used: aldrin - det. code 483 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

4.3 NATIONAL NETWORK MONITORING - SEA (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 39140 Musselwick Sands

SM 785 090

EOS : Not specified so a "standstill" provision applies.

Determinands used: aldrin - det. code 483 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

- 5 Pollution Control should notify the Senior Environmental Regulations Scientist immediately if a discharge commences or changes in his area. If this occurs further monitoring will be necessary and a sampling programme will be set up.

A draft copy of each year's return will be circulated to Pollution Control Managers for comments, to provide reasons for failing to achieve EQSs and to update the inventories of discharges, prior to submission to DOE.

A copy of the final version of the return will be circulated to Pollution Control Managers for information and to note any missing data, for rectification in the following year's monitoring programme.

A copy will also be sent to the Senior Environmental Regulations Scientist.

Sampling specified in 4.2 and 4.3 is not required until the programme for National Network estuary and sea monitoring for all List 1 substances is set up. At that time the location of the National Network sea site may be altered.

Dieldrin

- 1.1 Directive No. 86/280/EEC and 88/347/EEC
- 1.2 Submission of inventories of discharges to DOE: By 31 March 1990.

Commencement of sampling: January 1994

Submission of monitoring data to DOE: By 31 March 1995 then annually for preceding calendar year.

No known discharges of dieldrin exist in Wales so National Network Monitoring is all that is required.

- 4.1 NATIONAL NETWORK MONITORING - RIVERS (not affected by a discharge)

Frequency of sampling: monthly

Sampled at: All Harmonised Monitoring sites.

EQS : Not specified so a "standstill" provision applies.

Determinands used: dieldrin - det. code 511 (ug/l)

ARG used: UF02

These results are submitted to DOE on Form G (Environmental monitoring).

- 4.2 NATIONAL NETWORK MONITORING - ESTUARIES (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 74054 SEJC Centre Channel Site no.1 SS 909 585
(Centre of line between Nash Point & Hurlestone Point)

EQS : Not specified so a "standstill" provision applies.

Determinands used: dieldrin - det. code 511 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

4.3 NATIONAL NETWORK MONITORING - SEA (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 39140 Musselwick Sands SM 785 090

EQS : Not specified so a "standstill" provision applies.

Determinands used: dieldrin - det. code 511 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

- 5 Pollution Control should notify the Senior Environmental Regulations Scientist immediately if a discharge commences or changes in his area. If this occurs further monitoring will be necessary and a sampling programme will be set up.

A draft copy of each year's return will be circulated to Pollution Control Managers for comments, to provide reasons for failing to achieve EQSs and to update the inventories of discharges, prior to submission to DOE.

A copy of the final version of the return will be circulated to Pollution Control Managers for information and to note any missing data, for rectification in the following year's monitoring programme.

A copy will also be sent to the Senior Environmental Regulations Scientist.

Sampling specified in 4.2 and 4.3 is not required until the programme for National Network estuary and sea monitoring for all List 1 substances is set up. At that time the location of the National Network sea site may be altered.

Isodrin

- 1.1 Directive No. 86/280/EEC and 88/347/EEC
- 1.2 Submission of inventories of discharges to DOE: By 31 March 1990.

Commencement of sampling: January 1994

Submission of monitoring data to DOE: By 31 March 1995 then annually for preceding calendar year.

No known discharges of isodrin exist in Wales so National Network Monitoring is all that is required.

- 4.1 NATIONAL NETWORK MONITORING - RIVERS (not affected by a discharge)

Frequency of sampling: monthly

Sampled at: All Harmonised Monitoring sites.

EOS : Not specified so a "standstill" provision applies.

Determinands used: isodrin - det. code 9697 (ug/l)

ARG used: UF02

These results are submitted to DOE on Form G (Environmental monitoring).

- 4.2 NATIONAL NETWORK MONITORING - ESTUARIES (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 74054 SEJC Centre Channel Site no.1 SS 909 585
(Centre of line between Nash Point & Hurlestone Point)

EOS : Not specified so a "standstill" provision applies.

Determinands used: isodrin - det. code 9697 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

4.3 NATIONAL NETWORK MONITORING - SEA (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 39140 Musselwick Sands

SM 785 090

EOS : Not specified so a "standstill" provision applies.

Determinands used: isodrin - det. code 9697 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

- 5 Pollution Control should notify the Senior Environmental Regulations Scientist immediately if a discharge commences or changes in his area. If this occurs further monitoring will be necessary and a sampling programme will be set up.

A draft copy of each year's return will be circulated to Pollution Control Managers for comments, to provide reasons for failing to achieve EQSS and to update the inventories of discharges, prior to submission to DOE.

A copy of the final version of the return will be circulated to Pollution Control Managers for information and to note any missing data, for rectification in the following year's monitoring programme.

A copy will also be sent to the Senior Environmental Regulations Scientist.

Sampling specified in 4.2 and 4.3 is not required until the programme for National Network estuary and sea monitoring for all List 1 substances is set up. At that time the location of the National Network sea site may be altered.

Hexachlorobenzene

1.1 Directive No. 86/280/EEC and 88/347/EEC

1.2 Submission of inventories of discharges to DOE: By 31 March 1990.

Commencement of sampling: January 1990

Submission of monitoring data to DOE: By 30 April 1991 then annually for preceding calendar year.

No known discharges of hexachlorobenzene exist in Wales so National Network Monitoring is all that is required.

4.1 NATIONAL NETWORK MONITORING - RIVERS (not affected by a discharge)

Frequency of sampling: monthly

Sampled at: All Harmonised Monitoring sites.

EOS : Not specified so a "standstill" provision applies.

Determinands used: HCB - det. code 576 (ug/l)

ARG used: UF02

These results are submitted to DOE on Form G (Environmental monitoring).

4.2 NATIONAL NETWORK MONITORING - ESTUARIES (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 74054 SEJC Centre Channel Site no.1 SS 909 585
(Centre of line between Nash Point & Hurlestone Point)

EOS : Not specified so a "standstill" provision applies.

Determinands used: HCB - det. code 576 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

4.3 NATIONAL NETWORK MONITORING - SEA (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 39140 Musselwick Sands

SM 785 090

EOS : Not specified so a "standstill" provision applies.

Determinands used: HCB - det. code 576 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

- 5 Pollution Control should notify the Senior Environmental Regulations Scientist immediately if a discharge commences or changes in his area. If this occurs further monitoring will be necessary and a sampling programme will be set up.

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A copy of the final version of the return will be circulated to Pollution Control Managers for information and to note any missing data, for rectification in the following year's monitoring programme.

A copy will also be sent to the Senior Environmental Regulations Scientist.

Sampling specified in 4.2 and 4.3 is not required until the programme for National Network estuary and sea monitoring for all List 1 substances is set up. At that time the location of the National Network sea site may be altered.

Hexachlorobutadiene

1.1 Directive No. 86/280/EEC and 88/347/EEC

1.2 Submission of inventories of discharges to DOE: By 31 March 1990.

Commencement of sampling: January 1990

Submission of monitoring data to DOE: By 30 April 1991 then annually for preceding calendar year.

No known discharges of hexachlorobutadiene exist in Wales so National Network Monitoring is all that is required.

4.1 NATIONAL NETWORK MONITORING - RIVERS (not affected by a discharge)

Frequency of sampling: monthly

Sampled at: All Harmonised Monitoring sites.

EQS : Not specified so a "standstill" provision applies.

Determinands used: HCBd - det. code 9571 (ug/l)

ARG used: UF02

These results are submitted to DOE on Form G (Environmental monitoring).

4.2 NATIONAL NETWORK MONITORING - ESTUARIES (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 74054 SEJC Centre Channel Site no.1 SS 909 585
(Centre of line between Nash Point & Hurlestone Point)

EQS : Not specified so a "standstill" provision applies.

Determinands used: HCBd - det. code 9571 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

4.3 NATIONAL NETWORK MONITORING - SEA (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 39140 Musselwick Sands SM 785 090

EOS : Not specified so a "standstill" provision applies.

Determinands used: HCBd - det. code 9571 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

- 5 Pollution Control should notify the Senior Environmental Regulations Scientist immediately if a discharge commences or changes in his area. If this occurs further monitoring will be necessary and a sampling programme will be set up.

A draft copy of each year's return will be circulated to Pollution Control Managers for comments, to provide reasons for failing to achieve EQSs and to update the inventories of discharges, prior to submission to DOE.

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A copy will also be sent to the Senior Environmental Regulations Scientist.

Sampling specified in 4.2 and 4.3 is not required until the programme for National Network estuary and sea monitoring for all List 1 substances is set up. At that time the location of the National Network sea site may be altered.

Chloroform

1.1 Directive No. 86/280/EEC and 88/347/EEC

1.2 Submission of inventories of discharges to DOE: By 31 March 1990.

Commencement of sampling: January 1990

Submission of monitoring data to DOE: By 30 April 1991 then annually for preceding calendar year.

No known discharges of chloroform exist in Wales so National Network Monitoring is all that is required

4.1 NATIONAL NETWORK MONITORING - RIVERS (not affected by a discharge)

Frequency of sampling: monthly

Sampled at: All Harmonised Monitoring sites.

EOS : Not specified so "standstill" provision applies.

Determinands used: chloroform - det. code 816 (ug/l)

ARG used: UF02

These results are submitted to DOE on Form G (Environmental monitoring).

4.2 NATIONAL NETWORK MONITORING - ESTUARIES (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 74054 SEJC Centre Channel Site no.1 SS 909 585
(Centre of line between Nash Point & Hurlestone Point)

EOS : Not specified so a "standstill" provision applies.

Determinands used: chloroform - det. code 816 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

4.3 NATIONAL NETWORK MONITORING - SEA (not affected by a discharge)

Frequency of sampling: 6 samples per year

Sampling site: 39140 Musselwick Sands

SM 785 090

EOS : Not specified so a "standstill" provision applies.

Determinands used: chloroform - det. code 816 (ug/l)

ARG used: To be determined when programme for National Network estuary and sea monitoring for all List 1 substances is set up.

These results are submitted to DOE on Form G.

- 5 Pollution Control should notify the Senior Environmental Regulations Scientist immediately if a discharge commences or changes in his area. If this occurs further monitoring will be necessary and a sampling programme will be set up.

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A copy will also be sent to the Senior Environmental Regulations Scientist.

Sampling specified in 4.2 and 4.3 is not required until the programme for National Network estuary and sea monitoring for all List 1 substances is set up. At that time the location of the National Network sea site may be altered.

SAMPLING SUMMARY

	Sampling Frequency	Sampling Sites	Determinands
Cadmium	Monthly (minimum)	Discharges:	
		17095	253
		68024	
		68025	
		16062	
	under review	(70513	
		(11009	
	Monthly	EQS Rivers:	
		17004	108
	6 per year	68323	
		EQS Estuaries:	
		90005	106
		90006	
		90007	
90008			
1 per year (sediment)	90009		
	90010		
	EQS Sediment:		
17004	254		
68323			
1 per year (<u>Mytilus edulis</u>)	EQS Shellfish:		
	19103	1254	
Monthly	Nat.Net.Rivers:		
	HM Sites	108	
6 per year	Nat.Net.Estuaries:		
	74054	106	
6 per year	Nat.Net.Sea:		
	39140	106	
HCH	Monthly	Nat.Net.Rivers:	
		HM Sites	9836
			487
			491
			499
		** 495	
	6 per year	* Nat.Net.Estuaries:	
		74054	9836
			487
			491
			499
		** 495	
	6 per year	* Nat.Net.Sea:	
		39140	9836
		487	
		491	
		499	
	** 495		

Sampling Summary (contd)

	Sampling Frequency	Sampling Sites	Determinands
Mercury	Monthly	Nat.Net.Rivers: HM Sites	105
	6 per year	* Nat.Net.Estuaries: 74054	103
	6 per year	* Nat.Net.Sea: 39140	103
PP DDT	Monthly	Nat.Net.Rivers: HM Sites	555
	6 per year	* Nat.Net.Estuaries: 74054	555
	6 per year	* Nat.Net.Sea: 39140	555
Total DDT	Monthly	Nat.Net.Rivers: HM Sites	575
			555
	6 per year	* Nat.Net.Estuaries: 74054	539
			551
	6 per year	* Nat.Net.Sea: 39140	575
			555
		539	
		551	
CCl ₄	Monthly	Nat.Net.Rivers: HM Sites	9698
	6 per year	* Nat.Net.Estuaries: 74054	9698
	6 per year	* Nat.Net.Sea: 39140	9698
PCP	Monthly	Nat.Net.Rivers: HM Sites	1085
	6 per year	* Nat.Net.Estuaries: 74054	1085
	6 per year	* Nat.Net.Sea: 39140	1085

Sampling Summary (contd)

	Sampling Frequency	Sampling Sites	Determinands	
Endrin	Monthly	Nat.Net.Rivers: HM Sites	562	
	6 per year	* Nat.Net.Estuaries: 74054	562	
	6 per year	* Nat.Net.Sea: 39140	562	
Total "Drins"	Monthly	Nat.Net.Rivers: HM Sites	9570 562 483 511 9697	
		* Nat.Net.Estuaries: 74054	9570 562 483 511 9697	
	6 per year	* Nat.Net.Sea: 39140	9570 562 483 511 9697	
	Aldrin	Monthly	Nat.Net.Rivers: HM Sites	483
		6 per year	* Nat.Net.Estuaries: 74054	483
6 per year		* Nat.Net.Sea: 39140	483	
Dieldrin	Monthly	Nat.Net.Rivers: HM Sites	511	
	6 per year	* Nat.Net.Estuaries: 74054	511	
	6 per year	* Nat.Net.Sea: 39140	511	
Isodrin	Monthly	Nat.Net.Rivers: HM Sites	9697	
	6 per year	* Nat.Net.Estuaries: 74054	9697	
	6 per year	* Nat.Net.Sea: 39140	9697	

Sampling Summary (contd)

	Sampling Frequency	Sampling Sites	Determinands
HCB	Monthly	Nat.Net.Rivers: HM Sites	576
	6 per year	* Nat.Net.Estuaries: 74054	576
	6 per year	* Nat.Net.Sea: 39140	576
HCBD	Monthly	Nat.Net.Rivers: HM Sites	9571
	6 per year	* Nat.Net.Estuaries: 74054	9571
	6 per year	* Nat.Net.Sea: 39140	9571
Chloroform	Monthly	Nat.Net.Rivers: HM Sites	816
	6 per year	* Nat.Net.Estuaries: 74054	816
	6 per year	* Nat.Net.Sea: 39140	816

* This sampling is not required until the programme for National Network estuary and sea monitoring for all List 1 substances is set up.

** delta HCH not analysed at present

SUMMARY OF EOSs

Quality Standard - National Network - Stds.
(Affected by Discharge) (Not Affected by Discharge)

Background Env.Mon.

Cadmium

Inland surface waters:	tot Cd	5 ug/l	tot Cd	1 ug/l
Estuary waters:	*dis Cd	2.5 ug/l	dis Cd	1 ug/l
Territorial waters:	dis Cd	2.5 ug/l	dis Cd	0.5 ug/l
Sediments &/or <u>Mytilus edulis</u>	**standstill		***not specified	

HCH

Inland surface waters:	tot HCH	100 ng/l	tot HCH	50 ng/l
Estuary waters:	tot HCH	20 ng/l	***not specified	
Territorial waters:	tot HCH	20 ng/l	"	"
Sediments &/or molluscs &/or shellfish &/or fish	**standstill		"	"

Mercury

Inland surface waters:	tot Hg	1 ug/l	***not specified	
Estuary waters:	*dis Hg	0.3 ug/l	"	"
Territorial waters:	dis Hg	0.3 ug/l	"	"
Sediments &/or shellfish	**standstill		"	"

PP DDT

Inland surface waters:	tot PP DDT	10 ng/l	**standstill	
Estuary waters:	tot PP DDT	10 ng/l	"	
Territorial waters:	tot PP DDT	10 ng/l	"	
Sediments &/or molluscs &/or shellfish &/or fish	**standstill		***not specified	

Total DDT

Inland surface waters:	tot DDT	25 ng/l	**standstill	
Estuary waters:	tot DDT	25 ng/l	"	
Territorial waters:	tot DDT	25 ng/l	"	
Sediments &/or molluscs &/or shellfish &/or fish	**standstill		***not specified	

Carbon tetrachloride

Inland surface waters:	CCl ₄	12 ug/l	***not specified	
Estuary waters:	CCl ₄	12 ug/l	"	"
Territorial waters:	CCl ₄	12 ug/l	"	"
Sediments &/or shellfish	***not specified		"	"

* EQS is quoted in the Directive as 5 ug/l dis Cd and 0.5 ug/l dis Hg for estuary waters but the UK Regulations '89 specify the more stringent standards of 2.5 ug/l dis Cd and 0.3 ug/l dis Hg.

Summary of EOBs (contd)

Quality Standard (Affected by Discharge) Background Env. Mon: - National Network - Stds. (Not Affected by Discharge)

Pentachlorophenol

Inland surface waters:	tot PCP	2 ug/l	***not specified
Estuary waters:	tot PCP	2 ug/l	" "
Territorial waters:	tot PCP	2 ug/l	" "
Sediments &/or molluscs &/or shellfish &/or fish	**standstill		" "

Endrin

Inland surface waters:	Endrin	5 ng/l	***not specified
Estuary waters:	Endrin	5 ng/l	" "
Territorial waters:	Endrin	5 ng/l	" "
Sediments &/or molluscs &/or shellfish &/or fish	**standstill		" "

Total "Drins"

Inland surface waters:	30 ng/l	(E 5ng/l)	***not specified
Estuary waters:	30 ng/l	(E 5ng/l)	" "
Territorial waters:	30 ng/l	(E 5ng/l)	" "
Sediments &/or molluscs &/or shellfish &/or fish	**standstill		" "

Aldrin

Inland surface waters:	Aldrin	10 ng/l	***not specified
Estuary waters:	Aldrin	10 ng/l	" "
Territorial waters:	Aldrin	10 ng/l	" "
Sediments &/or molluscs &/or shellfish &/or fish	**standstill		" "

Dieldrin

Inland surface waters:	Dieldrin	10 ng/l	***not specified
Estuary waters:	Dieldrin	10 ng/l	" "
Territorial waters:	Dieldrin	10 ng/l	" "
Sediments &/or molluscs &/or shellfish &/or fish	**standstill		" "

Isodrin

Inland surface waters:	Isodrin	5 ng/l	***not specified
Estuary waters:	Isodrin	5 ng/l	" "
Territorial waters:	Isodrin	5 ng/l	" "
Sediments &/or molluscs &/or shellfish &/or fish	**standstill		" "

Summary of EOSS (contd)

Quality Standard Background Env.Mon.
- National Network - Stds.
(Affected by Discharge) (Not Affected by Discharge)

HCB

Inland surface waters:	HCB	0.03 ug/l	***not specified
Estuary waters:	HCB	0.03 ug/l	" "
Territorial waters:	HCB	0.03 ug/l	" "
Sediments &/or molluscs &/or shellfish &/or fish	**standstill		" "

HCBD

Inland surface waters:	HCBD	0.1 ug/l	***not specified
Estuary waters:	HCBD	0.1 ug/l	" "
Territorial waters:	HCBD	0.1 ug/l	" "
Sediments &/or molluscs &/or shellfish &/or fish	**standstill		" "

Chloroform

Inland surface waters:	CHCl ₃	12 ug/l	***not specified
Estuary waters:	CHCl ₃	12 ug/l	" "
Territorial waters:	CHCl ₃	12 ug/l	" "
Sediments &/or molluscs &/or shellfish &/or fish	**not specified		" "

- ** A "standstill" provision requires that the parameters concerned should not show deterioration in quality over a number of years taking into account recognised statistical variation.
- *** Where the background environmental monitoring standard is "not specified" then the "standstill" provision applies.

Discharge and monitoring of List 1 substances

• Please read the guidance notes overleaf

Name of substance

EEC Directive No.

Water Authority/River Purification Board

Annual return for 19

Inventories

A Industrial discharges to sewers treated at sewage treatment works

No. of sheets sent by WARP/B

B Industrial discharges to sewers leading to a direct discharge

C Direct industrial discharges to rivers, estuaries and the sea

D Discharges by sewage treatment works

Monitoring results

E Quality standards in water - sampling points demonstrating compliance with environmental quality standards

F Quality standards - Sediment/Shellfish

G Quality standards - Environmental monitoring

H Limit values

Completed by _____ Date _____

Address Of Water Authority/River Purification Board _____

_____ Postcode _____ 

Inventory of discharges to sewers treated at sewage treatment works - Form A

WA/RPB Sheet of

No.	Name and address of works	Industrial sector No.	Consent conditions			Receiving sewage works
			max concentration ug/l	max flow m ³ /day	max monthly load kg.	

Comments	Estimated load discharged kg/year	Handling capacity

Inventory of discharges to sewers leading to a direct discharge - Form B

WA/RPB Sheet of

No.	Name and address of works	Industrial sector No.	Consent conditions			Receiving water	Points of discharge (grid ref.)	Monitoring points	Comments	Estimated load discharged kg/year	Handling capacity
			max concentration ug/l.	max flow m ³ /day	max monthly load kg.						

Inventory of direct industrial discharges to rivers, estuaries and the sea - Form C

WA/RPB Sheet of

No.	Name and address of works	Industrial sector No.	Consent conditions			Receiving water	Points of discharge (grid ref.)	Monitoring points	Comments	Estimated load discharged kg/year	Handling capacity
			max concentration mg/l	max flow m ³ /day	max monthly load kg						

Inventory of discharges by sewage treatment works - Form D

WA/RPB

Sheet: of

No.	Name and address of sewage works	Estimated load discharged kg./year	Consent conditions			Receiving water	Point of discharge (grid ref)	Monitoring points	Comments
			max con- centration mg/l.	max flow m ³ /day	max monthly load kg.				

