**Offshore Industry Series**

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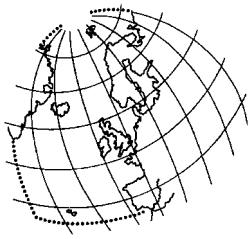
# OSPAR Report on Discharges, Spills and Emissions from Offshore Oil and Gas Installations in 2004



OSPAR Commission

2006

The Convention for the Protection of the Marine Environment of the North-East Atlantic (the "OSPAR Convention") was opened for signature at the Ministerial Meeting of the former Oslo and Paris Commissions in Paris on 22 September 1992. The Convention entered into force on 25 March 1998. It has been ratified by Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Luxembourg, Netherlands, Norway, Portugal, Sweden, Switzerland and the United Kingdom and approved by the European Community and Spain.

*La Convention pour la protection du milieu marin de l'Atlantique du Nord-Est, dite Convention OSPAR, a été ouverte à la signature à la réunion ministérielle des anciennes Commissions d'Oslo et de Paris, à Paris le 22 septembre 1992. La Convention est entrée en vigueur le 25 mars 1998. La Convention a été ratifiée par l'Allemagne, la Belgique, le Danemark, la Finlande, la France, l'Irlande, l'Islande, le Luxembourg, la Norvège, les Pays-Bas, le Portugal, le Royaume-Uni de Grande Bretagne et d'Irlande du Nord, la Suède et la Suisse et approuvée par la Communauté européenne et l'Espagne.*



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# contents

# Executive Summary/Récapitulatif

Regular reporting is required in order to review progress in implementing the OSPAR Offshore Industry Strategy and in implementing the OSPAR decisions and recommendations related to offshore oil and gas activities.

*Une notification régulière s'impose pour suivre la progression de la mise en œuvre de la stratégie OSPAR visant l'industrie de l'offshore, ainsi que l'application des décisions et des recommandations OSPAR qui visent les activités pétrolières et gazières en offshore.*

Since 1978, discharges and waste handling from offshore oil and gas installations have been addressed and regularly reported under the former Paris Convention (PARCOM) and under the OSPAR Convention. Since the beginning of the 1990s air emissions from these installations have been reported as well.

*Depuis 1978, les rejets et le traitement des déchets des installations pétrolières et gazières en offshore ont été abordés, et ont fait l'objet de rapports réguliers dans le contexte de l'ancienne Convention de Paris (PARCOM) et de la Convention OSPAR. Depuis le début des années 1990, les émissions atmosphériques de ces installations ont également été notifiées.*

The data have been reported using the Data Collection Format for the Annual OSPAR Report on Discharges, Spills and Emissions from Offshore Oil and Gas Installations (reference number 2005-14).

*Les données ont été communiquées sur le formulaire de collecte des données, ceci aux fins du rapport annuel OSPAR sur les rejets, les épandages et les émissions des installations pétrolières et gazières (No Référence 2005-14).*

Part A of the report compiles 2004 data on the number of installations with emissions and discharges, discharges contaminated with oil, the use and discharge of drilling fluids and cuttings, and chemicals used and discharged offshore. It also reports on accidential spills of oil and chemicals and emissions to air.

*Dans la partie A du rapport, sont collationnées les données de 2004 sur le nombre d'installations procédant à des émissions et à des rejets, à des rejets contaminés par des hydrocarbures, sur la consommation et les rejets de fluides de forage, de déblais de forage et de produits chimiques utilisés et rejetés en offshore. Y sont également indiqués les déversements accidentels d'hydrocarbures et de produits chimiques, ainsi que les émissions dans l'atmosphère.*

Part B shows the dicharges and emissions over the past years (discharge data back to 1984, emissions data back to 1992) to show the trends in discharges and emissions and use of chemicals.

*Dans la partie B, sont indiqués les rejets et les émissions au cours des dernières années (les données des rejets depuis 1984, et les données des émissions depuis 1992) afin de mettre en évidence les tendances des rejets et des émissions ainsi que la consommation des produits chimiques.*

The annual report 2004 does not assess the findings. The offshore report to be published in 2007 will include data for 2005 as well as an assessment of both the 2004 and 2005 data and the trends.

*Le rapport annuel 2004 ne porte aucun jugement sur les constatations. Le rapport sur l'industrie de l'offshore, devant être publié en 2007, comprendra les données relatives à 2005, ainsi qu'une évaluation des données et des tendances de 2004 et 2005.*

# 1. Introduction

## 1.1 Programmes and measures

The Offshore Oil and Gas Industry Strategy (Offshore Strategy) sets the objective of preventing and eliminating pollution and taking the necessary measures to protect the maritime area against the adverse effects of offshore activities so as to safeguard human health and of conserving marine ecosystems and, when practicable, restoring marine areas which have been adversely affected.

As its timeframe, the Offshore Strategy further declares that the Commission will implement this Strategy progressively and, in so far as they apply, following on and consistent with the commitments made in the other OSPAR Strategies.

The Offshore Strategy provides that OSPAR will address the programmes and measures:

a. needed to prevent, control and eliminate pollution under Annex III of the OSPAR Convention;

b. to be adopted under Annex V of the OSPAR Convention following the identification of relevant human activities.

In doing so, the Offshore Strategy requires the Commission to collect information about threats to the marine environment from pollution or from adverse effects from offshore activities; establish priorities for taking action; and establish and periodically review environmental goals to achieve the Offshore Strategy's objectives.

As part of this process, the Commission should develop and keep under review programmes and measures to identify, prioritise, monitor and control the emissions, discharges and losses of substances which could reach the marine environment and which are likely to cause pollution. Regular reporting is therefore required in order to review progress towards the targets of the Offshore Strategy.

Since 1978, discharges and waste handling from offshore oil and gas installations have been addressed and regularly reported under the former Paris Convention (PARCOM) and under the OSPAR Convention. Since the beginning of the 1990s air emissions from these installations have been reported as well. The following relevant measures[1] are applicable under the OSPAR Convention:

***Discharges contaminated with oil***

- Sampling and analysis procedure for the 40 mg/l target standard (reference number: 1997-16) will be replaced by agreement 2005-15 from 1 January 2007;
- OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations;

***Use and discharge of drilling fluids and cuttings***

- OSPAR Decision 2000/3 on the Use of Organic-phase Drilling Fluids (OPF) and the Discharge of OPF-contaminated Cuttings;
- Guidelines for the Consideration of the Best Environmental Option for the Management of OPF-Contaminated Cuttings Residue (reference number: 2002-8);

***Chemicals used and discharged offshore***

- OSPAR Decision 2000/2 on a Harmonised Mandatory Control System for the Use and Reduction of the Discharge of Offshore Chemicals;
- OSPAR Recommendation 2000/4 on a Harmonised Pre-Screening Scheme for Offshore Chemicals;
- OSPAR Recommendation 2000/5 on a Harmonised Offshore Chemical Notification Format (HOCNF);

and a whole suite of Other Agreements concerning guidance on test methods and completing data sets, and lists of chemicals that will contribute to the implementation of these measures.

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[1] All measures referred to in this chapter can be downloaded from the OSPAR website www.ospar.org (under "Offshore Oil and Gas Industry").

### 1.2 Annual reporting

In 1978, Contracting Parties to the former Paris Convention initiated reporting on discharges and waste handling from offshore oil and gas installations. These data were submitted by Contracting Parties and compiled by the Secretariat and, following examination by the relevant subsidiary bodies, published by the Commission in the form of annual reports; at first as part of the Commission's general annual report, and from 1992 onwards in annual reports on discharges of oil in the Convention area. From 1999 onwards, the annual reports (starting with 1996 and 1997 data) also contain an assessment of discharges, spills and emissions including a description of the trends from the beginning/mid of the 1989s until the date of the report.

Over time, reporting requirements and formats for data collection were regularly reviewed and updated in the light of ongoing work under the Commission as regards offshore installations. With a view to harmonising the way in which data and information are being established and reported, the Programmes and Measures Committee (PRAM) of the OSPAR Commission adopted in 1995 a reporting format and procedures, which set out the requirements for data and information to be provided by Contracting Parties. This reporting format was revised by the Offshore Industry Committee in 2002 for preparing on a trial basis the publication of a more detailed annual report starting with the 2001 data. After evaluation of its first application, the current reporting format (reference number: 2005-14) was confirmed to be used for the submission of data and information for the Annual OSPAR Report on Discharges, Spills and Emissions from Offshore Installations.

### 1.3 Assessment

The annual report 2004 does not assess the findings. Figures highlighted in yellow still need to be confirmed. The offshore report to be published in 2007 will include data for 2005 as well as an assessment of both the 2004 and 2005 data and the trends.

## 2. Results

**Part A: Report relating to 2004 data**

**Part B: Cumulative Report**

### 2.1 General information

The continental decimal system is used throughout this report (with a space as 1000 separator and a comma as decimal separator) with one decimal number after the comma.

NI means No Information available, i.e. unknown or missing data (data different from 0)

NA means Not Applicable, i.e. that the criteria is not relevant. For sums and totals, it is equivalent to 0.

### 2.2 Glossary

***OP*** is the acronym for organic phase

***Organic-phase drilling fluid (OPF)*** means an organic-phase drilling fluid, which is an emulsion of water and other additives in which the continuous phase is a water-immiscible organic fluid of animal, vegetable or mineral origin

***Base fluid*** means the water immiscible fluid which forms the major part of the continuous phase of the OPS

***Drilling fluid*** means base fluid together with those additional chemicals which constitute the drilling system

***Oil-based fluids (OBF)*** means low aromatic and paraffinic oils and those mineral oil-based fluids that are neither synthetic fluids nor fluids of a class whose use is otherwise prohibited

***Synthetic fluid*** means highly refined mineral oil-based fluids and fluids derived from vegetable and animal sources

***Cuttings*** means solid material removed from drilled rock together with any solids and liquids derived from any adherent drilling fluids

***Whole OPF*** means OPF not adhering to or mixed with cuttings

***WBM*** is the acronym for water-based muds

# Part A: Report relating to 2004 data

# Part A: Report relating to 2004 data

## Table 1: Number of installations with emissions and discharges covered by OSPAR measures [A]

**Year: 2004**

| Country | Production [B] | | Subsea [E] | Drilling [F] | Other [G] | Total |
|---|---|---|---|---|---|---|
| | Oil [C] | Gas [D] | | | | |
| Denmark | 8 | 0 | 0 | 7,41 | 0 | **15,41** |
| Germany [1] | 1 | 2 | 0 | 0,175 | 0 | **3,175** |
| Ireland | NI | 2 | 2 | 1 | 1 | **6** |
| Netherlands | 8 | 100 | 6 | 10 | 0 | **124** |
| Norway | 47 | 8 | 32 | 7,7 | 8 | **102,7** |
| Spain | 0 | 0 | 0 | 0 | 1 | **1** |
| United Kingdom | 80 | 145 | 138 | 32 | 1 | **396** |
| **Total** | **144** | **257** | **178** | **58** | **11** | **648** |

A. Platforms are reported separately, even when they are joined by walkways or bridges.

B. Installations are reported as "Production" when production has started, even if drilling is still undergoing. Storage installations are considered as "Production".

C. Installations which produce oil and gas are considered as "oil installations".

D. Installations which produce gas and condensate are considered as "gas installations".

E. One installation per cluster of well heads.

F. Exploration & development drilling rigs with no simultaneous production only.The number is expressed in years-equivalent of activity.

G. Example: offshore underground storage.

[1] = 1 gas platform without any emissions and discharges; the number of drilling platforms increased by 0,175 because of drilling activities for 2 months.

# Part A: Report relating to 2004 data

## Table 2: Produced water and displacement water

This table refers to all waters discharged to the sea (except cooling and sewage water) the quality of which should fit with OSPAR measures (cf. OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations). Drainage water is considered so far of such little consequence that there is no reporting requirement for OSPAR.

### Year: 2004

### Table 2a: Produced water [A]

| Country | Total number of installations [B] | Annual quantity of water discharged [C] | Annual average oil content (mg/l) | | | Total amount of oil discharged (tonnes) | | | Number of installations injecting water [F] | Annual quantity of water injected [F] |
|---|---|---|---|---|---|---|---|---|---|---|
| | | $m^3$ | dissolved [D] | dispersed [D] | total [E] | dissolved [D] | dispersed [D] | total [E] | | $m^3$ |
| Denmark | 10 | 19 646 538 | 14,9 | 21,7 | 36,6 | 292 | 427 | 719 | 3 | 10 697 293 |
| Germany | 1 | 8 055 | 90,7 | 25,1 | 114,2 | 0,8 | 0,2 | 1 | 1 | 185 489 |
| Ireland | NI | 3 007 | 125,16 | 40,84 | 166 | 0,38 | 0,12 | 0,5 | NI | NI |
| Netherlands | 69 | 8 509 214 | 9 | 14 | 23 | 76 | 119 | 195 | 5 | 6 376 580 |
| Norway | 39 | 142 803 237 | 10,8 | 19,1 | 29,9 | 1 547 | 2 723 | 4 270 | 20 | 29 794 046 |
| Spain [1] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 808 |
| United Kingdom | 107 | 251 955 792 | 13 | 21 | 34 | 3 275 | 5 278 | 8 553 | 12 | 27 921 396 |
| **Total** | **226** | **422 925 843** | **12,3** | **20,2** | **32,5** | **5 191** | **8 547** | **13 739** | **42** | **74 978 612** |

A. "Produced water" means water which is produced in oil and/or gas production operations and includes formation water, condensation water and re-produced injection water; it also includes water used for desalting oil (Citation from OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations; definition of produced water).
B. Total number of installations discharging produced water.
C. Total quantity of produced water discharged to the sea during the year.
D. Dissolved and dispersed oils are, by definition, the oily compounds measured according to the PARCOM procedure as described in OSPAR Reference document 1997-16. (IR, 3 or 1 wavelengths). Calculations are based on 1 or 3 wavelengths, depending whether it is aliphatics or aromatics which are to be reported.
E. Total = dissolved + dispersed
F. Produced water only (excluding sea water for pressure maintenance).

[1] The water injected has increased in relation to 2003. The cause is the water formation in Gaviota.

# Part A: Report relating to 2004 data

## Table 2b: Displacement water [A]

### Year: 2004

| Country | Total number of installations [B] | Annual quantity of water discharged [C] $m^3$ | Annual average oil content (mg/l) | | | Total amount of oil discharged (tonnes) | | | Number of installations injecting water [F] | Annual quantity of water injected [F] |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | dissolved [D] | dispersed [D] | total [E 1] | dissolved [D] | dispersed [D] | total [E 2] | | |
| Denmark | 2 | 5 019 593 | 0,01 | 0,8 | 1 | 0,04 | 4 | 4 | 0 | 0 |
| Germany | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ireland | NI | NI | NI | NI | 0 | NI | NI | 0 | NI | NI |
| Netherlands | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 195 | 1 | 1 523 310 |
| Norway | 6 | 53 326 642 | NI | 3 | 3 | NI | 158 | 158 | 0 | 0 |
| Spain | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| United Kingdom | 1 | 69 891 | 10 | 21 | 30 | 1 | 1 | 2 | 0 | 0 |
| **Total** | **10** | **58 416 126** | **NI** | **2,8** | **NI** | **NI** | **163** | **NI** | **1** | **1 523 310** |

A. "Displacement water" is the seawater which is used for ballasting the storage tanks of the offshore installations (when oil is loaded into the tanks, the water is displaced, and is discharged to the sea; when oil is downloaded to shuttle tanks, seawater is introduced into the storage tanks to replace the downloaded oil).

B. Total number of installations discharging displacement water.

C. Total quality of displacement water discharged to the sea during the year.

D. Dissolved and dispersed oils are, by definition, the oily compounds measured according to the PARCOM procedure as described in OSPAR Reference document 1997-16. (IR, 3 or 1 wavelengths). Calculations are based on 1 or 3 wavelengths, depending whether it is aliphatics or aromatics which are to be reported.

E. Total = dissolved + dispersed

F. Displacement water only (excluding sea water for pressure maintenance).

1. When no information is available on the annual average content of dissolved oils, total cannot be determined.
2. When no information is available on the total amount of dispersed oils discharged, total cannot be determined.

## Part A: Report relating to 2004 data

## Table 3: Installations exceeding the 40 mg/l performance standard for dispersed oil

*This table concerns installations for which the average annual oil content of the produced water discharged to the sea exceeds the 40 mg/l performance standard as defined in OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations*

**Year: 2004**

| Country/ Installation [A] | Type of installation [B] | Type of water treatment equipment [C] | Quantity of water discharged during the year ($10^3$ $m^3$) | Annual average oil content [D] (mg/l) | | | Total amount of oil discharged (tonnes per year) [E] | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | dissolved | dispersed | total | dissolved | dispersed | total |
| Ireland/Alpha Kinsale Head Gasfield | Gas | Coalescer | 3 | 125 | 41 | 166 | 0,4 | 0,12 | 0,5 |
| Netherlands/NAM/K15-FA-1 | Gas | MPPE | 1 877 | 488 | 159 | 647 | 0,9 | 0,3 | 1,2 |
| Norway/Brage | Oil | Hydrocyclone degassing tank, Epcon CFU | 4 274 | 14 | 46 | 60 | 61,0 | 195,0 | 256,0 |
| Norway/Oseberg A | Oil | Oily water separator, flotation unit | 2 116 | 24 | 66 | 90 | 51,0 | 140,0 | 191,0 |
| Norway Grane | Oil | Hydrocyclone, degassing tank | 150 | 7 | 58 | 65 | 1,0 | 9,0 | 10,0 |
| UK/BP Cleeton | Gas | Horizontal Gravity Separator | 16 | 261 | 40 | 301 | 4,2 | 0,7 | 4,8 |
| UK/ BP Ravenspurn North | Gas | Three Phase Separator | 8,8 | 141 | 586 | 727 | 1,2 | 5,1 | 6,4 |
| UK/West Sole Alpha | Gas | Three Phase Separator | 4,0 | 53 | 79 | 132 | 0,2 | 0,3 | 0,5 |
| UK/BP - West Sole Charlie | Gas | Three Phase Separator | 12 | 23,0 | 111 | 134 | 0,29 | 1,38 | 2 |
| UK/Centrica Storage Ltd - Rough 47/3A | Gas | Oily Water Separator | 2 | 138,0 | 212 | 350 | 0,34 | 0,52 | 1 |
| UK/Centrica Storage Ltd - Rough 47/3B | Gas | Oily Water Separator | 0,1 | 52,0 | 67 | 119 | 0,01 | 0,01 | 0 |
| UK/Hydrocarbon Resources Ltd - Morecambe DP1 | Gas | Separator/Degasser | 19 | 1 | 69 | 70 | 0,02 | 1,28 | 1 |
| UK/Hydrocarbon Resources Ltd - Morecambe DP4 | Gas | Discharging through DP1 now | 22 | 1 | 87 | 88 | 0,02 | 1,86 | 2 |
| UK/Hydrocarbon Resources Ltd - Morecambe DP6 | Gas | Discharging through DP1 now | 0,3 | 1 | 109 | 110 | 0,00 | 0,03 | 0 |
| UK/Hydrocarbon Resources Ltd - Morecambe DP8 | Gas | Discharging through DP1 now | 1 | 1 | 48 | 49 | 0,00 | 0,06 | 0 |
| UK/Mobil North Sea Ltd - Excalibur | Gas | Discharging through DP1 now | 3 | 18,0 | 90 | 108 | 0,05 | 0,25 | 0 |

# Part A: Report relating to 2004 data

| Country/ Installation [A] | Type of installation [B] | Type of water treatment equipment [C] | Quantity of water discharged during the year ($10^3$ $m^3$) | Annual average oil content [D] (mg/l) | | | Total amount of oil discharged (tonnes per year) [E] | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | dissolved | dispersed | total | dissolved | dispersed | total |
| UK/Mobil North Sea Ltd - Guinevere | Gas | Separator/Degasser | 1 | 42,0 | 44 | 86 | 0,03 | 0,03 | 0 |
| UK/Mobil North Sea Ltd - Thames Production Platform | Gas | PW skimmer/Tilted Plate Separator | 67 | 12,0 | 78 | 90 | 0,80 | 5,24 | 6 |
| UK/Paladin Resources plc - Montrose Alpha | Oil | Gravity Separator | 811 | 13,0 | 47 | 60 | 10,55 | 38,01 | 49 |
| Perenco UK Ltd - Inde 49/23A | Gas | Horizontal Gravity Separator | 26 | 235,0 | 329 | 564 | 6,15 | 8,60 | 15 |
| Perenco UK Ltd - Leman 49/27A | Gas | Scrubbers and Coalescer | 7 | 15,0 | 450 | 465 | 0,11 | 3,18 | 3 |
| Perenco UK Ltd - Trent 043/24 | Gas | Scrubbers, Coalescer and Degasser | 0,5 | 20,0 | 119 | 139 | 0,01 | 0,06 | 0 |
| Perenco UK Ltd - Tyne 044/18 | Gas | Scrubbers, Coalescer and Degasser | 0,02 | 1116,0 | 209 | 1325 | 0,03 | 0,00 | 0 |
| Shell UK Exp and Prod - Leman Alpha | Gas | Gravity Separator | 25 | 6,0 | 112 | 118 | 0,15 | 2,85 | 3 |
| Shell UK Exp and Prod - Sean Papa | Gas | Gravity Separator | 1 | 582,0 | 1 503 | 2085 | 0,66 | 1,70 | 2 |
| Shell UK Exp and Prod - Solepit Clipper PT | Gas | Gravity Separator | 36 | 69,5 | 302 | 372 | 2,49 | 10,83 | 13 |
| Talisman Energy (UK) Ltd - Buchan Alpha | Oil | Hydrocyclones/DGF unit | 773 | 12,0 | 47 | 59 | 9,27 | 36,67 | 46 |
| TOTAL E+P UK PLC - Alwyn North B | Oil | 3 stage separation | 5 496 | 31,5 | 50 | 81 | 173,13 | 274,10 | 447 |
| **Total** | | | **15 752** | **20,6** | **46,8** | **67,4** | **324** | **737** | **1 061** |

A. Name of the installation where the discharge took place.
B. Same categories as in table 1: Oil (O), Gas (G), Sub-sea (S), Other (oth) installations.
C. Piece of equipment at the outlet of which the oil content - exceeding 40 mg/l - is measured.
D. The annual average oil content is calculated on the basis of the total weight of oil discharged per year by the installation, divided by the total volume of produced water discharged during the same period.
E. The figures for Contracting Parties' total amount of oil discharged have been rounded up. The overall total value is the exact figure and may differ slightly from the sum of the Contracting Parties' total amount of oil discharged.

# Part A: Report relating to 2004 data

## Table 4: Use and discharges of organic-phase drilling fluids (OPF) [A]

**Year: 2004**

### Table 4a: Use and discharges of oil-based fluids (OBF) [B]

| Country | Total amount of OBF used (tonnes) | Cuttings discharged to the sea | | | OPF cuttings injected | | Cuttings transported to shore [E] (tonnes) |
|---|---|---|---|---|---|---|---|
| | | Number of wells concerned | Average oil concentration on cuttings (g/kg) | Total amount of oil discharged [C] (tonnes) | Number of wells concerned | Total amount of cuttings injected [D] (tonnes) | |
| Denmark | 20 909 | 0 | NA | 0 | 3 | 4 052 | 8 609 |
| Germany [1] | 2 336 | 0 | 0 | 0 | 0 | 0 | 1 799 |
| Ireland | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Netherlands | 20 650 | 0 | 0 | 0 | 0 | 0 | 8 364 |
| Norway | 132 062 | 0 | NA | 0 | 76 | 51 691 | 20 329 |
| Spain | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| United Kingdom | 106 034 | 0 | 0 | 0 | 14 | 6 220 | 24 413 |
| **Total OBF** | **281 991** | **0** | **0** | **0** | **93** | **61 963** | **63 514** |

A. Organic-phase drilling fluid (OPF) means an organic-phase drilling fluid, which is an emulsion of water and other additives in which the continuous phase is a water-immiscible organic fluid of animal, vegetable or mineral origin.

B. Oil-based fluids (OBF) means low aromatic and paraffinic oils and those mineral oil-based fluids that are neither synthetic fluids nor fluids of a class whose use is otherwise prohibited.

C. Estimated amount of oil discharged to the sea, through the cuttings discharged.

D. Estimated amount of cuttings injected into disposal wells, excluding the water added for slurryfication.

E. Amount of cuttings transported to shore, for treatment and/or disposal.

[1] The total amount of OPF used and the amount of cuttings transported to shore increased because of an increase in drilling activities (2002: 1 well; 2003: 3 wells).

# Part A: Report relating to 2004 data

## Table 4b: Use and discharges of non-OBF organic-phase drilling fluids (non-OBF OPF) [A]

**Year: 2004**

| Country | Total amount of non-OBF OPF used (tonnes) | Cuttings discharged to the sea | | | OPF cuttings injected | | Cuttings transported to shore [D] (tonnes) |
|---|---|---|---|---|---|---|---|
| | | Number of wells concerned | Average organic phase concentration on cuttings (g/kg) | Total amount organic phase fluids discharged [B] (tonnes) | Number of wells concerned | Total amount of cuttings injected [C] (tonnes) | |
| Denmark | 0 | 0 | NA | 0 | 0 | 0 | 0 |
| Germany | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ireland | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Netherlands | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Norway | 2 298 | 4 | 129 | 425 | 0 | 0 | 0 |
| Spain | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| United Kingdom | 4 422 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total non-OBF OPF** | **6 720** | **5** | **129** | **425** | **0** | **0** | **0** |
| **Grand total OPF [E]** | **288 711** | **5** | **129** | **425** | **93** | **61 963** | **63 514** |

A. Definitions in the OSPAR Decision 2000/3 on the Use of Organic-phase Drilling Fluids (OPF) and the Discharge of OPF-contaminated Cuttings:
Organic-phase drilling fluid (OPF) means an organic-phase drilling fluid, which is an emulsion of water and other additives in which the continuous phase is a water-immiscible organic fluid of animal, vegetable or mineral origin;
Oil-based fluids (OBF) means low aromatic and paraffinic oils and those mineral oil-based fluids that are neither synthetic fluids nor fluids of a class whose use is otherwise prohibited;

B. Estimated amount of organic phase discharged to the sea, through the cuttings discharged.
C. Estimated amount of cuttings injected into disposal wells, excluding the water added for slurryfication.
D. Amount of cuttings transported to shore, for treatment and/or disposal.
E. Total OBF + non-OBF OPF.

# Part A: Report relating to 2004 data

## Table 5: Accidental spillages

**Year: 2004**

### Table 5a: Accidental spillages of oil

| Country | Number of oil spills | | | Quantity of oil spilled (tonnes) | | |
|---|---|---|---|---|---|---|
| | ≤ 1 tonne | > 1 tonne | Total number | ≤ 1 tonne | > 1 tonne | Total number |
| Denmark | 70 | 0 | 70 | 6 | 50 | 56 |
| Germany | 0 | 0 | 0 | 0 | 0 | 0 |
| Ireland | 0 | 0 | 0 | 0 | 0 | 0 |
| Netherlands | 31 | 1 | 32 | 0,1 | 1,6 | 1,7 |
| Norway | 108 | 10 | 118 | 7 | 58 | 65 |
| Spain | 0 | 0 | 0 | 0 | 0 | 0 |
| United Kingdom | 445 | 13 | 458 | 29 | 47 | 76 |
| **Total** | **654** | **24** | **678** | **42,1** | **156,6** | **198,7** |

### Table 5b: Accidental spillages of chemicals [A]

| Country | Number of chemical spillages | | | Quantity of chemicals spilled (tonnes) | | |
|---|---|---|---|---|---|---|
| | ≤ 1 tonne | > 1 tonne | Total number | ≤ 1 tonne | > 1 tonne | Total number |
| Denmark | 0 | 1 | 1 | 0 | 3 | 3 |
| Germany | 0 | 0 | 0 | 0 | 0 | 0 |
| Ireland | 0 | 0 | 0 | 0 | 0 | 0 |
| Netherlands | 3 | 1 | 4 | 0,1 | 4,0 | 4,1 |
| Norway | 78 | 31 | 109 | 22 | 883 | 905 |
| Spain | 0 | 0 | 0 | 0 | 0 | 0 |
| United Kingdom | 41 | 16 | 57 | 5 | 150 | 155 |
| **Total** | **122** | **49** | **171** | **27,1** | **1040,0** | **1067,1** |

A. Chemicals: all oil free spillages + non-OBF OPF drilling fluids spillages + oily WBM spillages (lubricant).

# Part A: Report relating to 2004 data

## Table 6: Emissions to air

### Year: 2004

| Country | $CO_2$ [A] ($10^3$ tonnes) | $NO_x$ [B] ($10^3$ tonnes) | nmVOCs [C] ($10^3$ tonnes) | $CH_4$ [D] ($10^3$ tonnes) | $SO_2$ ($10^3$ tonnes) |
|---|---|---|---|---|---|
| Denmark | 2 304 | 7,2 | 5,1 | 8,2 | 0,48 |
| Germany | 32,3 | 0,1 | 0,007 | 0,02 | 0,002 |
| Ireland | 71,30 | 0,16 | 0,20 | 0,53 | 0,00 |
| Netherlands | 1 237 | 3,74 | 3,6 | 11,2 | 0,13 |
| Norway | 11 336 | 51,6 | 131,6 | 30,8 | 0,6 |
| Spain | 35,9 | 0,0764 | 0,0865 | 0,257 | 0,00021 |
| United Kingdom | 18 520 | 60,1 | 66,1 | 54,7 | 2,94 |
| **Total** | **33 536** | **123** | **207** | **106** | **4,2** |

A. $CO_2$ is carbon dioxide emitted, not the carbon dioxide equivalents of the various greenhouse gases. Carbon monoxide (CO) is not included.

B. $NO_x$ is the sum of nitric oxide (NO) and nitrogen dioxide ($NO_2$) expressed as $NO_2$ equivalent. Nitrous oxide ($N_20$) is not included as a component of $NO_x$.

C. VOCs (Volatile Organic Compounds) comprise all hydrocarbons, other than methane, released to the atmosphere.

D. $CH_4$ corresponds to the methane released to the atmosphere, from any source.

# Part A: Report relating to 2004 data

## Table 7: The use and discharge of offshore chemicals

### Year: 2004

### Table 7a: Quantity of offshore chemicals used in kg/year

| Country | Prescreening Category [A] | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Plonor [B] | "LCPA" [C] | $LC_{50}$ or $EC_{50}$ < 1 mg/l [D] | Biodegradation < 20 % [E] | Substances meet two of three criteria [F] | Inorganic, LC50 or EC50 > 1 mg/l [G] | Ranking [H] | Total |
| Denmark [1] | 52 667 440 | 136 | 14 839 | 1 782 941 | 1 494 033 | 14 196 383 | 17 001 572 | **87 160 754** |
| Germany | 977 651 | 0 | 0 | 4833 | 652 623 | 0 | 424 432 | **2 059 539** |
| Ireland | 830 542 | NI | NI | NI | 26 | NI | NI | **830 568** |
| Netherlands | 26 342 421 | 0 | 0 | 645 108 | 356 013 | 2 031 702 | 2 813 009 | **34 265 450** |
| Norway | 226 932 000 | 800 | 0 | 3 769 100 | 4 069 000 | NI | 83 915 000 | **318 685 900** |
| Spain | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| United Kingdom | 126 364 612 | 2 285 | 0 | 4 227 698 | 8 014 175 | 33 542 | 63 147 289 | **201 789 601** |
| **Total** | **434 114 666** | **3 221** | **14 839** | **10 429 680** | **14 585 870** | **16 261 627** | **167 301 302** | **644 791 812** |

A. According to OSPAR Recommendation 2000/4 on a Harmonised Pre-screening Scheme for Offshore Chemicals and the terminology used in this Recommendation.
B. Substance on OSPAR List of Substances Used and Discharged Offshore which are Considered to Pose Little or no Risk to the Environment (PLONOR) (Reference Number: 2004-10).
C. Substance listed in the OSPAR List of Chemicals for Priority Action (LCPA) (including its updates). Previously called Annex 2 substances because it referred to Annex 2 of the 1998 OSPAR Strategy with regard to Hazardous Substances. This Annex 2 has now been replaced by the LCPA. (Reference Number: 2004-12)
D. Inorganic substance with $LC_{50}$ or $EC_{50}$ less than 1 mg/l.
E. Biodegradation of the substance is less than 20% during 28 days.
F. Substance meets two of the following three criteria:
I. (biodegradation in 28 days less than 70% (OECD 301A, 301E) or less than 60% (OECD 301B, 301C, 301F, 306);
II. bioaccumulation log Pow > 3 or BCF > 100 and considering molecular weight;
III. toxicity LC50 < 10mg/l or EC50 < 10mg/l.
G. Inorganic substance with LC50 or EC50 over 1 mg/l.
H. Substance does not fulfill the above mentioned criteria (1-7) and is therefore ranked according to OSPAR Recommendation 2000/4.

[1] DK Total includes 3 410 kg of chemicals not pre-screened

# Part A: Report relating to 2004 data

## Table 7b: Quantity of offshore chemicals discharged in kg/year

## Year: 2004

| Country | Prescreening Category [A] | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Plonor [B] | "LCPA" [C] | $LC_{50}$ or $EC_{50}$ < 1 mg/l [D] | Biodegradation < 20 % [E] | Substances meet two of three criteria [F] | Inorganic, LC50 or EC50 > 1 mg/l [G] | Ranking [H] | Total |
| Denmark [1] | 30 666 043 | 14 | 1 215 | 123 729 | 301 211 | 980 564 | 3 191 761 | **35 266 136** |
| Germany [2] | 761 332 | 0 | 0 | 634 | 9 429 | 0 | 69 099 | **840 494** |
| Ireland | 460 057 | NI | NI | NI | 0,6 | NI | NI | **460 058** |
| Netherlands | 10 946 870 | 0 | 0 | 67 883 | 40 589 | 239 625 | 151 747 | **11 788 652** |
| Norway | 63 582 000 | 200 | 0 | 211 490 | 81 900 | NI | 10 599 000 | **74 474 590** |
| Spain | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| United Kingdom | 64 219 437 | 191 | 0 | 1 734 676 | 4 062 814 | 25 964 | 29 930 079 | **99 973 161** |
| **Total** | **170 635 739** | **405** | **1 215** | **2 138 412** | **4 495 944** | **1 246 153** | **43 941 686** | **222 803 091** |

A. According to OSPAR Recommendation 2000/4 on a Harmonised Pre-screening Scheme for Offshore Chemicals and the terminology used in this Recommendation.
B. Substance on OSPAR List of Substances Used and Discharged Offshore which are Considered to Pose Little or no Risk to the Environment (PLONOR) Reference Number: 2004-10).
C. Substance listed in the OSPAR List of Chemicals for Priority Action (LCPA) (including its updates). Previously called Annex 2 substances because it referred to Annex 2 of the 1998 OSPAR Strategy with regard to Hazardous Substances. This Annex 2 has now been replaced by the LCPA. (Reference Number: 2004-12)
D. Inorganic substance with $LC_{50}$ or $EC_{50}$ less than 1 mg/l.
E. Biodegradation of the substance is less than 20% during 28 days.
F. Substance meets two of the following three criteria:
I. (biodegradation in 28 days less than 70% (OECD 301A, 301E) or less than 60% (OECD 301B, 301C, 301F, 306);
II. bioaccumulation log Pow > 3 or BCF > 100 and considering molecular weight;
III. toxicity $LC_{50}$ < 10mg/l or $EC_{50}$ < 10mg/l.
G. Inorganic substance with LC50 or EC50 over 1 mg/l.
H. Substance does not fulfill the above mentioned criteria (1-7) and is therefore ranked according to OSPAR Recommendation 2000/4.

[1] DK Total includes 1 599 kg of chemicals not pre-screened

[2] The amount discharged increased because of drilling operations including discharges (2002: only drilling without discharges).

# Part B: Cumulative Report

# Part B: Cumulative Report

## Table1: Number of installations in the OSPAR maritime area

### Table 1a: Number of installations in the OSPAR maritime area with discharges to the sea, or emissions to the air, 1984-2004*

| Country | 1984 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denmark | 7 | 20 | 20 | 20 | 10,5 | 8 | 8,23 | 9 | 12 | 15 | 16 | 16 | 19 | 17 | 19 | 15 |
| France [1] | 0 | 0 | 0 | 0 | 0 | 0 | 0,1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0,1 | NI |
| Germany | 1 | 3 | 3 | 4 | 2 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 3 |
| Ireland | 1 | 2 | 2 | 2 | 0 | 0 | 0 | 4 | 5 | 2,2 | 2,5 | 2,5 | 4 | 4 | NI | 6 |
| Netherlands | 30 | 63 | 60 | 88 | 97 | 103,5 | 114,93 | 113,8 | 106,3 | 104,1 | 105 | 108 | 114 | 114 | 123 | 124 |
| Norway [2] | 13 | 24 | 25 | 34 | 93 | 90 | 83 | 61 | 53 | 54 | 59 | 60 | 65 | 67 | 63 | 103 |
| Spain | 1 | 1 | 1 | 1 | 1 | 1,5 | 9 | 5 | 2 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| UK [3] | 90 | 79 | 79 | 79 | 81 | 152 | 169 | 193 | 164 | 218 | 186 | 298 | 332 | 381 | 383 | 396 |
| **Total** | **143** | **192** | **190** | **228** | **284,5** | **356** | **385,26** | **387,8** | **344,3** | **395,3** | **371,5** | **488,5** | **538** | **586** | **592** | **648** [2] |

### Table 1b [4]: Total number of installations in the OSPAR maritime area, 1984-2004**

| | 1984 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | NI | NI | NI | NI | 320 | 438 | 459 | 554 | 520 | 560 | 587 | 591 | NI | 1070 | 1131 [3] | 1130 |

[1] France had 1 exploratory well in 1995, and 1 in 2003.

[2] The fact that Norway reports subsea installations for the first time in 2004 leads to an artificial significant increase in the total.

[3] UK has revised its criteria for counting subsea installations as from 2000.

[4] The increase of the number of installations from year 2002 is mainly due to the change of rules in counting the installations. The numbers given for 2003 and 2004 reflect the current OSPAR database on offshore installations set up in accordance with OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations

* These data are taken from table 1 of Part A of the report.

** These data are taken from the OSPAR inventory on offshore installations

# Part B: Cumulative Report

**Table 1c: Number of installations by type of installation in the OSPAR maritime area with discharges to the sea, or emissions to the air, 1993-2004 ***

| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Oil | 88 | 104 | 99 | 133 | 120 | 135 | 137 | 174 | 152 | 153 | 146 | 144 |
| Gas | 148 | 183 | 204 | 207 | 171 | 164 | 186 | 239 | 223 | 225 | 254 | 257 |
| Subsea | 6 | 6 | 75 | 5 | 6 | 87 | 44 | 6,5 | 81 | 120 | 143 | 178 |
| Drilling | 43 | 63 | 7 | 43 | 47 | 9 | 4 | 69 | 76 | 86 | 45 | 58 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 2 | 4 | 11 |
| **Total** | **285** | **356** | **385** | **388** | **344** | **395** | **371** | **489** | **537** | **586** | **592** | **648** |

* These data are taken from table 1 of Part A of the report.

# Part B: Cumulative Report

## Table 2: Oily aqueous discharges to the maritime area *

### Table 2a: Oil discharged in displacement and produced water (in tonnes), 1984-2004

| Country | 1984 | 1990 | 1992 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2001 | 2002 | 2002 | 2003 | 2003 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Dissolved | Dispersed | Dissolved | Dispersed | Dissolved | Dispersed |
| Denmark | 57 | 36 | 72 | 138 | 129 | 164 | 127 | 174 | 180 | 271 | 205 | 290 | 192 | 294 | 265 | 358 |
| Germany | NI | NI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0,045 | 0,32 | 0,22 | 0,42 | 0,17 | 0,50 | 0,20 |
| Ireland | NI | NI | NI | NI | NI | 0 | 0,005 | 0,02 | 0,042 | 0,245 | NI | NI | NI | NI | NI | NI |
| Netherlands | 76 | 262 | 239 | 265 | 231 | 249 | 265 | 204 | 162 | 189 | 82 | 252 | 57 | 148 | 72 | 114 |
| Norway | 154 | 460 | 613 | 1 009 | 1 402 | 1 750 | 2 332 | 2 492 | 2 750 | 3 047 | 1 101 | 3 153 | 1 165 | 2 827 | 906 | 2 769 |
| Spain | 0 | 0,065 | NI | 0 | NI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UK | 1 430 | 3 187 | 4 940 | 4 615 | 5 886 | 5 784 | 5 789 | 5 692 | 5 676 | 5 751 | 3 710 | 5 694 | 4 260 | 5 721 | 3 599 | 5 276 |
| **Total** | **1 717** | **3 945** | **5 864** | **6 027** | **7 648** | **7 947** | **8 513** | **8 562** | **8 768** | **9 258** | **5 098** | **9 390** | **5 674** | **8 990** | **4 843** | **8 517** |

| Country | 2004 | 2004 |
|---|---|---|
| | Dissolved | Dispersed |
| Denmark | 292 | 431 |
| Germany | 0,80 | 0,20 |
| Ireland | 0,38 | 0,12 |
| Netherlands | 76 | 119 |
| Norway | 1 547 | 2 881 |
| Spain | 0 | 0 |
| UK | 3 276 | 5 279 |
| **Total** | **5 192** | **8710** |

### Table 2b: Quantity of displacement and produced water discharged daily to the sea (in $m^3$/day), 1984-2004

| Country | 1984 | 1990 | 1992 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denmark | | | | 14 247 | | 13 425 | 14 630 | 18 000 | 27 435 | 43 909 | 46 273 | 44 158 | 54 243 | 67 578 |
| Germany | | | | 0 | | 0 | 0 | 0 | 0 | 14 | 14 | 19 | 18 | 22 |
| Ireland | | | | NI | | 7 | 7,52 | 6,69 | 5 | 6 | 7 | 8 | NI | 8 |
| Netherlands | NI | NI | NI | 35 105 | NI | 35 214 | 33 895 | 30 303 | 25 000 | 31 820 | 38 117 | 24 263 | 21 381 | 23 313 |
| Norway | | | | 316 029 | 365 502 | 412 283 | 438 779 | 462 969 | 442 225 | 461 323 | 493 342 | 490 826 | 524 910 | 537 342 |
| Spain | | | | NI | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UK | | | | 512 657 | | 567 540 | 642 973 | 693 151 | 716 130 | 652 188 | 696 482 | 738 082 | 719 950 | 690 481 |
| **Total** | | | | **878 038** | | **1 028 469** | **1 130 285** | **1 204 430** | **1 210 795** | **1 189 260** | **1 274 236** | **1 297 356** | **1 320 502** | **1 318 745** |

* These data are taken from table 2 of Part A of the report.

# Part B: Cumulative Report

## Table 3: Installations which cannot meet OSPAR performance standard for dispersed oil in aqueous discharges [A] *

### Table 3a[B]: Number of installations with discharges exceeding the 40 mg oil/l performance standard, 1984-2004, and quantity of oil discharged by these installations (in tonnes)

| | 1984 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total number of installations with discharges in the Convention area | 143 | 192 | 190 | 228 | 285 | 356 | 385 | 388 | 344 | 395 | 371 | 489 | 537 | 586 | 623 | 648 |
| Number of installations exceeding 40 mg/l | 12 | 70 | 68 | 65 | 64 | 59 | 46 | 45 | 32 | 39 | 28 | 15 | 23 | 20 | 22 | 28 |
| Quantity of dispersed oil[1] discharged | 601 | 2701 | 2027 | 4299 | 1017 | 1724 | 2429 | 840 | 607 | 420 | 153 | 365 | 312 | 216 | 217 | 737 |

1. "Dispersed oil", or aliphatics, as measured according to the PARCOM Procedure described in the "Methods of sampling and analysis for implementing the provisional target standard for discharges from oil and gas production platforms (OSPAR Reference document OSPAR 1997-16)

### Table 3b[B]: Number of installations with discharges exceeding the 40 mg oil/l performance standard, 1994-2004, by Contracting Party, and quantity of oil discharged by these installations (in tonnes)

| | 1994 | | 1995 | | 1996 | | 1997 | | 1998 | | 1999 | | 2000 | | 2001 | | 2002 | | 2003 | | 2004 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Country** | Number of instal-lations | Amount dis-charged | Number of instal-lations | Amount dis-charged | Number of instal-lations | Amount dis-charged | Number of instal-lations | Amount dis-charged | Number of instal-lations | Amount dis-charged | Number of instal-lations | Amount dis-charged | Number of instal-lations | Amount dis-charged | Number of instal-lations | Amount dis-charged | Number of instal-lations | Amount dis-charged [C] | Number of instal-lations | Amount dis-charged [C] | Number of instal-lations | Amount dis-charged [C] |
| Denmark | 1 | 3 | 0 | 0 | 2 | 2 | 1 | 4 | 2 | 27 | 2 | 29 | 2 | 42 | 1 | 6 | 0 | 0 | 1 | 52 | 0 | 0 |
| Germany | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ireland | NI | NI | NI | NI | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0,3 | 1 | 0,2 | 0 | 0 | 0 | 0 | NI | NI | 1 | 0,12 |
| Netherlands | 22 | 17 | 20 | 31 | 16 | 5 | 10 | 5 | 10 | 5 | 7 | 4 | 5 | 2 | 3 | 1 | 5 | 2 | 4 | 3 | 1 | 0,3 |
| Norway | 6 | 187 | 4 | 40 | 3 | 32 | 2 | 46 | 3 | 26 | 2 | 22 | 2 | 81 | 2 | 95 | 1 | 82 | 0 | 0 | 3 | 344 |
| Spain | NI | NI | NI | NI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UK | 30 | 1 517 | 22 | 2 359 | 24 | 702 | 19 | 551 | 24 | 362 | 16 | 98 | 5 | 240 | 16 | 210 | 14 | 130 | 17 | 162 | 23 | 393 |
| **Total** | **59** | **1 724** | **46** | **2 430** | **45** | **741** | **32** | **606** | **39** | **420** | **28** | **153** | **15** | **365** | **23** | **313** | **20** | **216** | **22** | **217** | **28** | **737** |

A. The performance standard of 40 mg/l is defined on the basis of a monthly average. Most Contracting Parties, however, reported until 2000 only installations which exceeded the 40 mg/l performance standard on the basis of an annual average. From 2001 onwards, all the data is based on annual averages.

B. Data in Tables 3a and 3b refer to dispersed oil only.

C. The figures for Contracting Parties' total amount of oil discharged have been rounded up. The overall total value is the exact figure and may differ slightly from the sum of the Contracting Parties' total amount of oil discharged.

* These data are taken from table 3 of Part A of the report.

# Part B: Cumulative Report

## Table 4: Use and discharge of organic-phase drilling fluisd (OPF) and cuttings *

### Table 4a: Quantities of oil and other organic-phase fluids discharged via cuttings (in tonnes), 1984-2004 *

| Country | 1984 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oil & Diesel[1] | Oil | Oil | Oil | Oil | Oil | Oil | Oil | Total OPF [2] | Total OPF [2] | Total OPF [2] | Total OPF [2] | Total OPF [2] | Total OPF [2] | Total OPF [2] | Total OPF [2] |
| Denmark | 676 | 507 | 0 | | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Germany | NI | NI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ireland | NI | NI | NI | NI | NI | NI | 0 | 0 | 0 | 0 | NI | NI | NI | NI | NI | 0 |
| Netherlands | 1 017 | 284 | 142 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Norway | 3 466 | 636 | 683 | 83 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 014 | 1 127 | 954 | 342 | 425 |
| Spain | 0 | 0 | 0 | 0 | 0 | 0 | NI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UK | 19 800 | 12 312 | 11 225 | 7 169 | 4 588 | 4 582 | 3 865 | 3 965 | 7 203 | 5 005 | 4 591 | 1 937 | 200 | 0 | 0 | 0 |
| **Total** | 24 959 | 13 739 | 12 050 | 7 293 | 4 588 | 4 582 | 3 865 | 3 965 | 7 234 | 5 005 | 4 591 | 3 951 | 1 327 | 954 | 342 | 425 |

[1] Diesel oil represents roughly 10% of total oil & diesel oil discharged in 1984. The discharge of diesel oil ceased in 1985.

[2] Total OPF is the sum of OBF and non-OBF OPF. No oil-based mud contaminated cuttings have been discharged since 1996

* These data are taken from table 4b of Part A of the report.

# Part B: Cumulative Report

## Table 4b: Number of wells drilled with OPF, 1984-2000

| Country | 1984 (1) | 1990 (1) | 1991 (1) | 1992 (1) | 1993 (1) | 1999(2) | | 2000(2) | |
|---|---|---|---|---|---|---|---|---|---|
| | OBM | OBM | OBM | OBM | OBM | OBM | OPF | OBM | OPF |
| Denmark | 13 | 20 | 21 | 22 | 32 | 8 | NA | 5 | NA |
| Germany | 0 | 1 | 1 | 0 | 0 | 4 | 0 | 3 | 0 |
| Ireland | NI | 4 | 0 | 0 | NI | NI | NA | NI | NA |
| Netherlands | 56 | 49 | 59 | 52 | 37 | 22 | 0 | 16 | 0 |
| Norway | 76 | 96 | 97 | 138 | 116 | 98 | NA | NI | NA |
| Spain | NI | NI | NI | NI | NI | 0 | NA | 0 | NA |
| United Kingdom | 290 | 314 | 425 | 372 | 336 | 0 | 166 | 133 | NA |
| **Total** | **435** | **484** | **603** | **584** | **521** | **132** | **166** | **157** | **NA** |

(1) data on OBM only for these years. Other OPF not yet in use.
(2) OPF (non-OBF OPF) was only reported on a voluntary basis.

## Table 4c: Number of wells drilled with OPF, with discharge of contaminated cuttings to the maritime area, 2001-2004

| Country | 2001(2) | | 2002(2) | | 2003(2) | | 2004(2) | |
|---|---|---|---|---|---|---|---|---|
| | OBF | non-OBF OPF | OBF | non-OBF OPF | OBF | non-OBF OPF | OBF | non-OBF OPF |
| Denmark | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Germany | 0 | 0 | 0 | 0 | 0 | NI | 0 | 0 |
| Ireland | NI | NA | 0 | 1 | NI | NI | 0 | 0 |
| Netherlands | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 |
| Norway | 0 | 24 | 0 | 13 | 0 | 7 | 0 | 4 |
| Spain | 0 | 0 | NA | N/A | NA | NA | 0 | 0 |
| United Kingdom | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **3** | **27** | **0** | **14** | **0** | **7** | **17** | **4** |

(2) Wells for which all cuttings are re-injected or brought to shore are not taken into account in table 6.

* These data are taken from table 4 of Part A of the report.

# Part B: Cumulative Report

## Table 5: Spillage and flaring of oil *

### Table 5a: Number of oil spills, 1994-2004 - Spills less than 1 tonne (≤ 1 T) and spills above 1 tonne (> 1 T)

| Country | 1994 | | 1995 | | 1996 | | 1997 | | 1998 | | 1999 | | 2000 | | 2001 | | 2002 | | 2003 | | 2004 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T |
| Denmark | 105 | 10 | 126 | 1 | 105 | 1 | 71 | 2 | 110 | 0 | 99 | 4 | 69 | 4 | 79 | 0 | 58 | 2 | 82 | 2 | 70 | 0 |
| Germany | NI | NI | NI | NI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ireland | NI | NI | NI | NI | 0 | 0 | 0 | 0 | 1 | 1 | NI | NI | NI | NI | 0 | 0 | 0 | 0 | NI | NI | 0 | 0 |
| Netherlands | 82 | 2 | 0 | 61 | 63 | 2 | 63 | 1 | 60 | 0 | 16 | 1 | 27 | 0 | 35 | 1 | 24 | 0 | 33 | 0 | 31 | 1 |
| Norway | 349 | 7 | 281 | 14 | 246 | 9 | 245 | 10 | 249 | 15 | 226 | 12 | 198 | 5 | 221 | 7 | 238 | 9 | 121 | 11 | 108 | 10 |
| Spain | NI | NI | NI | NI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| United Kingdom | 136 | 21 | 129 | 9 | 276 | 19 | 304 | 24 | 366 | 11 | 347 | 11 | 406 | 12 | 408 | 17 | 454 | 16 | 366 | 6 | 445 | 13 |
| **Total** | **672** | **40** | **536** | **85** | **690** | **31** | **683** | **37** | **786** | **27** | **688** | **28** | **700** | **22** | **743** | **25** | **774** | **27** | **602** | **19** | **654** | **24** |

### Table 5b: Quantity of oil spilled , in tonnes, 1994-2004

| Country | 1994 | | 1995 | | 1996 | | 1997 | | 1998 | | 1999 | | 2000 | | 2001 | | 2002 | | 2003 | | 2004** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T | ≤ 1 T | > 1 T |
| Denmark | <26 | 10 | <66 | 1 | 7,3 | 1,1 | 11,7 | 2,8 | 11 | 0 | 11 | 9 | 5,5 | 402,5 | 15 | 0 | 7 | 21 | 12 | 6,8 | 6 | 50 |
| Germany | NI | NI | NI | NI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ireland | NI | NI | NI | NI | 0 | 0 | 0 | 0 | <1 | 0 | NI | NI | NI | NI | 0 | 0 | 0 | 0 | NI | NI | 0 | 0 |
| Netherlands | <8,2 | 2 | 1,5 | 0 | 1 | 38 | 0,9 | 18 | 1,26 | 0 | 1 | 5,6 | 0,5 | 0 | 0,8 | 3,04 | 1 | 0 | 0,179 | 0 | 0,119 | 1,625 |
| Norway | 32 | 23 | 28 | 89 | 37 | 26 | 35,6 | 72,4 | 25 | 131 | 23 | 114 | 16 | 12 | 18,4 | 24,7 | 16,5 | 76,4 | 47 | 690 | 7 | 58 |
| Spain | NI | NI | NI | NI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| United Kingdom [1] | 17,8 | 155,2 | 19,2 | 64,5 | 80,9 | 45,1 | 34,1 | 828,9 | 36,9 | 97,1 | 42 | 77 | 38 | 36 | 33,5 | 509,1 | 31,24 | 60,46 | 21 | 47 | 29 | 47 |
| **Total** | **<84** | **190,2** | **<114,7** | **154,5** | **126,2** | **110,2** | **82,3** | **922,1** | **<74,2** | **228,1** | **77** | **205,6** | **60** | **453,5** | **68** | **537** | **56** | **158** | **80** | **744** | **42** | **157** |

1. Revised data for 2001: Pipeline leak investigated in 2001 resulted in operator being fined for a discharge of 450 tonnes of crude oil

### Table 5c: Number of flaring operations, and quantity of oil spilled through flaring, in tonnes, 1994-2003

**Number of flaring operations**

| Country | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|---|---|---|---|---|
| Denmark | 1 | 2 | 0 | 4 | 5 | 3 | 0 | 0 | 0 | 0 |
| Germany | NI | NI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ireland | NI | NI | 0 | 0 | 1 | NI | NI | 0 | 0 | NI |
| Netherlands | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Norway | NI | NI | 0 | NI | NI | NI | NI | NI | 5 | 12 |
| Spain | NI | NI | 0 | 0 | 0 | 0 | NA | 0 | 0 | 0 |
| United Kingdom | 3 | 7 | 5 | 13 | 15 | 4 | 5 | 10 | 11 | 10 |
| **Total** | **4** | **9** | **7** | **19** | **21** | **7** | **5** | **10** | **16** | **22** |

**Quantity of oil spilled (tonnes)**

| 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|---|---|---|---|
| 4 | 0,1 | 0 | NI | 0,02 | 0,5 | 0 | 0 | 0 | 0 |
| NI | NI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NI | NI | 0 | 0 | 0 | NI | NI | 0 | 0 | NI |
| 0 | 0 | 0,01 | 0,01 | 0 | 0 | 0 | 0 | 0 | 0 |
| NI | NI | 0 | NI | NI | NI | 6,1 | 14,1 | 0,8 | 3,7 |
| NI | NI | 0 | 0 | 0 | 0 | NI | 0 | 0 | 0 |
| 1,09 | 0,62 | 1,4 | 0,94 | 3,19 | 1,35 | 4 | 1,35 | 5 | 0,5 |
| **5,1** | **0,7** | **1,4** | **1,0** | **3,2** | **1,9** | **10,1** | **15,45** | **5,8** | **4,2** |

* These data are taken from table 5 of Part A of the report.

* From 2004 onwards flaring spillages are included in oil spillages (see table 5c)

# Part B: Cumulative Report

## Table 6: Emissions to air, 1992-2004 *

**$CO_2$ ($10^6$ tonnes)**

| Country | 1992 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Denmark | NI | 1,23 | 1,58 | 1,64 | 1,87 | 2,47 | 2,3 | 2,2 | 2,2 | 2,2 | 2,3 |
| Germany | 0,01 | 0,01 | 0,02 | 0,03 | 0,02 | 0,09 | 0,01 | 0,02 | 0,01 | 0,02 | 0,0 |
| Ireland | NI | NI | 0,10 | 0,025 | 0,11 | 0,1 | 0,09 | 0,08 | 0,07 | NI | 0,07 |
| Netherlands | NI | 1,22 | 1,11 | 1,19 | 1,59 | 1,29 | 1,20 | 1,33 | 1,33 | 1,27 | 0,13 |
| Norway | 7,5 | 8,1 | 8,9 | 8,47 | 9,34 | 9,38 | 10,09 | 11,1 | 10,79 | 11,40 | 11,34 |
| Spain | 0,86 | NI | 0,025 | 0,03 | 0 | 0 | 0,03 | 0,02 | 0,04 | 0,03 | 0,03 |
| United Kingdom | 79,36 | 20,46 | 15,9 | 19,1 | 20,9 | 19,8 | 18,3 | 19 | 19,9 | 18,79 | 18,52 |
| **Total** | 88 | 31 | 28 | 30 | 34 | 33 | 32 | 34 | 34 | 34 | 32 |

**$NO_x$ ($10^3$ tonnes)**

| 1992 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|
| NI | 6,24 | 6,77 | 8,4 | NI | 13,62 | 12,3 | 5,35 | 5,30 | 5,30 | 7,2 |
| 0,12 | 0,05 | 0,08 | 0,10 | 0,04 | 0,13 | 0,07 | 0,06 | 0,04 | 0,08 | 0,1 |
| NI | NI | 0,25 | 0,61 | 0,26 | 0,2 | 0,17 | 0,18 | 0,16 | NI | 0,16 |
| NI | 5,7 | 5,08 | 5,83 | 5,05 | 4,64 | 5,64 | 4,8 | 5 | 6,6 | 3,74 |
| 31,3 | 32 | 34,7 | 43 | 46,1 | 41 | 44,2 | 51 | 48,7 | 50,3 | 51,6 |
| 0,8 | NI | 0,113 | 0,14 | 0 | 0 | 0,11 | 0,04 | 0,08 | 0,07 | 0,076 |
| 195,7 | 56,69 | 38,8 | 57,8 | 66,7 | 55,8 | 45,8 | 53,5 | 69,43 | 61,25 | 60,1 |
| 228 | 101 | 86 | 116 | 118 | 115 | 108 | 115 | 129 | 124 | 123 |

**VOCs ($10^3$ tonnes)**

| Country | 1992 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Denmark | NI | 1 | 1 | 1 | NI | 2 | 9 | 10 | 10 | 8 | 5 |
| Germany | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ireland | NI | NI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NI | 0 |
| Netherlands | NI | 10 | 7 | 5 | 8 | 8 | 6 | 6 | 5 | 5 | 4 |
| Norway | 122 | 99 | 182 | 189 | 174 | 191 | 213 | 229 | 198 | 165 | 132 |
| Spain | 0 | NI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| United Kingdom | 208 | 76 | 59 | 107 | 80 | 75 | 73 | 87 | 93 | 79 | 66 |
| **Total** | 331 | 185 | 249 | 302 | 262 | 276 | 301 | 332 | 307 | 257 | 207 |

**$CH_4$ ($10^3$ tonnes)**

| 1992 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|
| NI | 2 | 2 | 3 | 5 | 2 | 3 | 10 | 7 | 7 | 8 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NI | NI | 1 | 1 | 3 | 16 | 1 | 25 | 0 | NI | 1 |
| NI | 55 | 41 | 25 | 21 | 20 | 15 | 16 | 13 | 19 | 11 |
| 11 | 13 | 26 | 29 | 26 | 29 | 29 | 34 | 32 | 31 | 31 |
| 1 | NI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 70 | 56 | 79 | 72 | 65 | 56 | 57 | 52 | 51 | 55 |
| 238 | 140 | 126 | 136 | 126 | 132 | 104 | 142 | 105 | 108 | 106 |

**$SO_2$ ($10^3$ tonnes)**

| Country | 1992 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Denmark | NI | NI | 0,1 | 0,1 | 0,1 | 0,3 | 0,3 | 0,6 | 0,3 | 0,4 | 0 |
| Germany | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0 |
| Ireland | NI | NI | 0,0 | 0,0 | 0,1 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0 |
| Netherlands | NI | 0,4 | 0,5 | 0,4 | 0,2 | 0,2 | 0,1 | 0,2 | 0,2 | 0,2 | 0 |
| Norway | NI | 0,2 | 0,3 | 0,0 | 0,6 | 0,1 | 1,4 | 0,9 | 0,8 | 0,6 | 1 |
| Spain | NI | NI | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0 |
| United Kingdom | 31,4 | 10,4 | 2,3 | 13,9 | 11,6 | 9,7 | 6,4 | 6,3 | 2,0 | 2,6 | 3 |
| Total | 31,4 | 11,0 | 3,2 | 14,4 | 12,7 | 10,3 | 8,2 | 8,0 | 3,3 | 3,7 | 4,2 |

* These data are taken from table 6 of Part A of the report.

# Part B: Cumulative Report

## Table 7: The use and discharge of offshore chemicals
**Year: 2001-2004**

### Table 7a: Quantity of offshore chemicals on the PLONOR* List used and discharged in kg/year

| Country | Quantity of chemicals used (kg) | | | | Quantity of chemicals discharged (kg) | | | |
|---|---|---|---|---|---|---|---|---|
| | 2001 | 2002 | 2003 | 2004 | 2001 | 2002 | 2003 | 2004 |
| Denmark | 92 514 186 | 72 358 514 | 60 382 417 | 52 667 440 | 51 541 713 | 50 619 400 | 38 246 458 | 30 666 043 |
| France | 0 | 0 | 526 654 | NI | 0 | 0 | 526 654 | NI |
| Germany | 21 300 | 4 000 | 1 098 862 | 977 651 | 19 170 | 3 600 | 517 593 | 761 332 |
| Ireland | NI | NI | NI | 830 542 | NI | NI | NI | 460 057 |
| NL | 23 995 497 | NI | 31 899 171 | 26 342 421 | 12 580 602 | NI | 10 920 587 | 10 946 870 |
| Norway | NI | NI | 237 163 000 | 226 932 000 | 115 098 100 | 102 934 930 | 78 976 000 | 63 582 000 |
| Spain | 0 | NA | 1 272 695 | 0 | 0 | NA | 976 450 | 0 |
| UK | 163 353 409 | 249 030 742 | 255 774 970 | 126 364 612 | 72 045 032 | 109 474 671 | 113 811 824 | 64 219 437 |
| **Total** | **279 884 392** | **321 393 256** | **588 117 769** | **434 114 666** | **251 284 617** | **263 032 601** | **243 975 566** | **170 635 739** |

* Substance on OSPAR List of Substances Used and Discharged Offshore which are Considered to Pose Little or no Risk to the Environment (PLONOR) (Agreement Number: 2004-10).

### Table 7b: Quantity of offshore chemicals used and discharged in kg/year, on the List of Chemicals for Priority Action (LCPA)*

| Country | Quantity of chemicals used (kg) | | | | Quantity of chemicals discharged (kg) | | | |
|---|---|---|---|---|---|---|---|---|
| | 2001 | 2002 | 2003 | 2004 | 2001 | 2002 | 2003 | 2004 |
| Denmark | 0 | 900 | 606 | 136 | 0 | 300 | 60 | 14 |
| France | 0 | 0 | 0 | NA | 0 | 0 | 0 | NA |
| Germany | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ireland | NI | NI | NI | NI | NI | NI | NI | NI |
| NL | 2 042 | NI | 302 | 0 | 145 | NI | 271 | 0 |
| Norway | NI | NI | 844 | 800 | 917 | 765 | 240 | 200 |
| Spain | 0 | NA | 0 | 0 | 0 | NA | 0 | 0 |
| UK | 0 | 222 | 2 090 | 2 285 | 0 | 46 | 171 | 191 |
| **Total** | **2 042** | **1 122** | **3 842** | **3 221** | **1 062** | **1 111** | **742** | **405** |

* Substance listed in the OSPAR List of Chemicals for Priority Action (LCPA) (including its updates). (Reference number: 2004-12)

# Part B: Cumulative Report

## Table 7: The use and discharge of offshore chemicals
**Year: 2001-2004**

**Table 7c: Quantity of offshore chemicals used and discharged in kg/year, in inorganic substances with $LC_{50}$ or $EC_{50}$ less than 1 mg/l**

| Country | Quantity of chemicals used (kg) | | | | Quantity of chemicals discharged (kg) | | | |
|---|---|---|---|---|---|---|---|---|
| | 2001 | 2002 | 2003 | 2004 | 2001 | 2002 | 2003 | 2004 |
| Denmark | 18 164 615 | 85 194 | 128 622 | 14 839 | 156 968 | 43 443 | 58 553 | 1 215 |
| France | 0 | 0 | 0 | NA | 0 | 0 | 0 | NA |
| Germany | 0 | 0 | 2 000 | 0 | 0 | 0 | 0 | 0 |
| Ireland | NI | NI | NI | NI | NI | NI | NI | NI |
| NL | 260 | NI | 0 | 0 | 1 | NI | 0 | 0 |
| Norway | NI | NI | 0 | 0 | 771 | 100 | 0 | 0 |
| Spain | 0 | NA | 0 | 0 | 0 | NA | 0 | 0 |
| UK | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **18 164 875** | **85 194** | **130 622** | **14 839** | **157 740** | **43 543** | **0** | **1 215** |

**Table 7d: Quantity of offshore chemicals used and discharged in kg/year, in substances where the biodegradation is less than 20% during 28 days**

| Country | Quantity of chemicals used (kg) | | | | Quantity of chemicals discharged (kg) | | | |
|---|---|---|---|---|---|---|---|---|
| | 2001 | 2002 | 2003 | 2004 | 2001 | 2002 | 2003 | 2004 |
| Denmark | 1 041 714 | 1 324 413 | 1 813 142 | 1 782 941 | 200 844 | 166 387 | 163 236 | 123 729 |
| France | 0 | 0 | 0 | NI | 0 | 0 | 0 | NI |
| Germany | 0 | 0 | 3 239 | 4 333 | 0 | 0 | 3 104 | 634 |
| Ireland | NI | NI | NI | NI | NI | NI | NI | NI |
| NL | 1 112 344 | NI | 4 279 111 | 645 108 | 9 592 | NI | 64 041 | 67 883 |
| Norway | NI | NI | 3 450 000 | 3 769 100 | 733 970 | 796 810 | 331 000 | 211 490 |
| Spain | 0 | NA | 0 | 0 | 0 | NA | 0 | 0 |
| UK | 12 826 964 | 4 934 729 | 8 240 728 | 4 227 698 | 2 247 435 | 1 328 207 | 1 547 258 | 1 734 676 |
| **Total** | **14 981 022** | **6 259 142** | **17 786 220** | **10 429 180** | **3 191 841** | **2 291 404** | **2 108 639** | **2 138 412** |

# Part B: Cumulative Report

## Table 7: The use and discharge of offshore chemicals

**Year: 2001-2004**

### Table 7e: Quantity of offshore chemicals used and discharged in kg/year in substances which meet two of three PBT-criteria*

| Country | Quantity of chemicals used (kg) | | | | Quantity of chemicals discharged (kg) | | | |
|---|---|---|---|---|---|---|---|---|
| | 2001 | 2002 | 2003 | 2004 | 2001 | 2002 | 2003 | 2004 |
| Denmark | 1 695 332 | 1 353 975 | 1 341 775 | 1 494 033 | 347 438 | 332 519 | 206 293 | 301 211 |
| France | 0 | 0 | 0 | NA | 0 | 0 | 0 | NA |
| Germany | 18500 | 20 337 | 1 132 505 | 652 623 | 175 | 183 | 1 372 | 9 429 |
| Ireland | NI | NI | NI | 26 | NI | NI | NI | 1 |
| NL | 919 017 | NI | 3 918 807 | 356 013 | 5 703 | NI | 11 368 | 40 589 |
| Norway | NI | NI | 4 023 000 | 4 069 000 | 327 472 | 210 150 | 293 000 | 81 900 |
| Spain | 0 | NA | 0 | 0 | 0 | NA | 0 | 0 |
| UK | 6 339 638 | 9 323 127 | 9 836 007 | 8 014 175 | 895 102 | 1 051 622 | 1 318 525 | 4 062 814 |
| **Total** | **8 972 487** | **10 697 439** | **20 252 094** | **14 585 870** | **1 575 890** | **1 594 474** | **1 830 558** | **4 495 944** |

* The criteria are as follows:

I. (biodegradation in 28 days less than 70% (OECD 301A, 301E) or less than 60% (OECD 301B, 301C, 301F, 306);

II. bioaccumulation log Pow > 3 or BCF > 100 and considering molecular weight;

III. toxicity LC50 < 10mg/l or EC50 < 10mg/l.

### Table 7f: Quantity of offshore chemicals used and discharged in kg/year in inorganic substances with $LC_{50}$ or $EC_{50}$ > 1 mg/l*

| Country | Quantity of chemicals used (kg) | | | | Quantity of chemicals discharged (kg) | | | |
|---|---|---|---|---|---|---|---|---|
| | 2001 | 2002 | 2003 | 2004 | 2001 | 2002 | 2003 | 2004 |
| Denmark | | | | 14 196 383 | | | | 980 564 |
| France | | | | NA | | | | NA |
| Germany | | | | 0 | | | | 0 |
| Ireland | | | | NI | | | | NI |
| NL | | | | 2 031 702 | | | | 239 625 |
| Norway | | | | NI | | | | NI |
| Spain | | | | 0 | | | | 0 |
| UK | | | | 33 542 | | | | 25 964 |
| **Total** | | | | **16 261 627** | | | | **1 246 153** |

* No data have been submitted prior to 2004

# Part B: Cumulative Report

## Table 7: The use and discharge of offshore chemicals
**Year: 2001-2004**

**Table 7g: Quantity of offshore chemicals used and discharged in kg/year, in substances ranked according to OSPAR Recommendation 2000/4 and which do not fulfill the criteria of tables 7 a, b, c, d, e and f**

| Country | Quantity of chemicals used (kg) | | | |
|---|---|---|---|---|
| | 2001 | 2002 | 2003 | 2004 |
| Denmark | 16 890 132 | 29 776 007 | 28 646 471 | 17 001 572 |
| France | 0 | 0 | 3 025 | NA |
| Germany | 55 700 | 84 900 | 361 531 | 424 432 |
| Ireland | NI | NI | NI | NI |
| NL | 7 339 587 | NI | 3 809 425 | 2 813 009 |
| Norway | NI | NI | 79 178 000 | 83 915 000 |
| Spain | 0 | NA | 16 950 | 0 |
| UK | 163 288 565 | 49 435 450 | 27 483 033 | 63 147 289 |
| **Total** | **187 573 984** | **79 296 357** | **139 498 435** | **167 301 302** |

| Quantity of chemicals discharged (kg) | | | |
|---|---|---|---|
| 2001 | 2002 | 2003 | 2004 |
| 5 009 968 | 4 580 064 | 4 194 417 | 3 191 761 |
| 0 | 0 | 3 025 | NA |
| 0 | 0 | 19 944 | 69 099 |
| NI | NI | NI | NI |
| 311 191 | NI | 157 936 | 151 747 |
| 11 815 950 | 10 897 930 | 10 977 000 | 10 599 000 |
| 0 | NA | 3 450 | 0 |
| 48 535 999 | 16 904 059 | 11 101 380 | 29 930 079 |
| **65 673 108** | **32 382 053** | **26 457 152** | **43 941 686** |

# Part B: Cumulative Report

## Table 8: Total discharges and spillage of dispersed oil, in tonnes, 1984-2004

| Country | 1984 | 1990 | 1992 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denmark | 763 | 543 | 81 | 178 | 196 | 172 | 173 | 185 | 201 | 679 | 305 | 322 | 377 | 487 |
| Germany | 0 | NI | NI | NI | NI | NI | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| Ireland | 0 | NI | NI | NI | NI | NI | 0 | 1 | 0,042 | 0,245 | 0 | 0 | NI | 0 |
| Netherlands | 1 153 | 546 | 285 | 275 | 232 | 288 | 284 | 205 | 169 | 190 | 256 | 149 | 114 | 231 |
| Norway | 3 900 | 1 096 | 1 491 | 1 064 | 1 519 | 1 813 | 2 440 | 2 648 | 2 887 | 3 075 | 3 210 | 2 921 | 3 506 | 2 946 |
| Spain | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| United Kingdom [1] | 21 360 | 15 499 | 12 335 | 9 371 | 9 835 | 9 876 | 13 856 | 10 832 | 10 387 | 5 473 | 6 010 | 5 817 | 5 345 | 5 355 |
| **Total** | 27 176 | 17 684 | 14 192 | 10 888 | 11 783 | 12 150 | 16 752 | 13 872 | 13 643 | 9 420 | 9 782 | 9 209 | 9 342 | 9 019 |

Notes :Spillages are not taken into account for 1990.

From 1997-1999, UK data include OPF.

Total for 2000 and the following years is the sum of tables 3a, 7b and 7c plus the OBF fraction of table 5 in part B.

[1] Revised data for 2001: Pipeline leak investigated in 2001 resulted in operator being fined for a discharge of 450 tonnes of crude oil