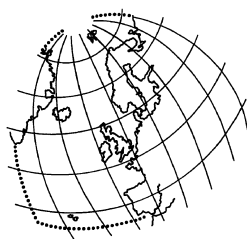


# **OSPAR Report on Discharges, Spills and Emissions from Offshore Oil and Gas Installations in 2005**

*including assessment of data reported  
in 2004 and 2005*



**OSPAR Commission**  
**2007**

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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ISBN 978-1-905859-74-0  
Publication Number: 2007/335

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## Executive Summary

This report presents in Part A of Section 3 the discharges, spills and emissions data from offshore installations for 2005. The cumulative data are presented in Part B of Section 3. Section 2 presents the assessment of the data reported for 2004 (OSPAR publication number 296) and 2005, and the trends over the last 7 years.

The total *production of hydrocarbons* in OSPAR's maritime area has decreased by 11 % in the period 2000-2005.

The total quantity of *dispersed oil (aliphatic oil) discharged* to the sea (from produced water, displacement water and accidental spillage) continued to decrease and was 8 913 tonnes in 2005 compared to 9 341 tonnes in 2003.

As in previous years, *produced water and displacement water* are the main contributors to the oil discharges from offshore oil and gas activities, representing 97,8 % of the total amount of oil discharged to the sea in 2004, but only 95,5 % in 2005 due to an increase in oil spills. Flaring is a minor source of oil discharges.

The total amount of produced water and displacement water discharged daily shows a slight but insignificant increase over the period 2001-2005. The *quality of the water discharged* (expressed as content of dispersed oil in the water discharged) has remained more or less stable over recent years. The annual average dispersed oil content in produced water in 2005 was 20,3 mg/l, well below the then performance standard for dispersed oil of 40 mg/l for produced water discharged into the sea.

The *number of installations which exceeded the 40 mg/l performance standard* for dispersed oil in produced water has increased from 20 in 2002 to 25 in 2005. Despite the efforts made to reduce the number of installations which have poor records, there are still some installations which raise significant concern.

The discharge of *organic phase drilling fluids* (OPF) (non-oil-based fluids) increased somewhat from 2003 to 2004, but in 2005 there were no discharges of OPF.

Since 2001 *use and discharge of chemicals* have been regulated by OSPAR. The first reporting year for which all major contributors provided data was 2003. The total quantity of chemicals used offshore in 2005 was 776 819 tonnes. Only 5 weight % of the chemicals used contain either substances on the OSPAR List of Chemicals for Priority Action (LCPA) or substances which are candidates for substitution.

The total quantity of chemicals discharged into the sea in 2005 was roughly 247 000 tonnes, almost 87% of this is chemicals on the OSPAR list of substances/preparations used and discharged offshore which are considered to pose little or no risk to the environment (PLONOR). Discharge to the sea of chemicals on the LCPA was 0,221 tonne.

An increasing trend in *atmospheric emissions* has been identified in the past. During the last seven years the picture seems to have changed slightly:

- SO<sub>2</sub> emissions decreased from 1999 – 2002, but has slightly increased thereafter;
- emissions of NO<sub>x</sub> and CO<sub>2</sub> have remained more or less stable;
- methane emissions has decreased slightly since 2003;
- non-methane VOC has decreased significantly in 2005 compared to 2003.

## Récapitulatif

En Partie A de la section 3 du présent rapport, il est fait état des données des rejets, des déversements et des émissions des installations offshore en 2005. Les données cumulées sont présentées en Partie B de la Section 3. La Section 2 présente l'évaluation des données communiquées au titre de 2004 (Numéro de publication OSPAR 296) et de 2005, de même que les tendances durant les 7 dernières années.

Dans la zone maritime d'OSPAR, la *production totale d'hydrocarbures* a diminué de 11% durant la période 2000-2005.

La quantité totale d'*hydrocarbures dispersés (hydrocarbures aliphatiques)* rejetés à la mer (dûs à l'eau de production, à l'eau de déplacement et aux déversements accidentels) a continué de baisser, et s'est élevée à 8 913 tonnes en 2005 comparé à 9 341 tonnes en 2003.

Comme les années précédentes, *c'est l'eau de production et l'eau de déplacement* qui sont les principaux contributeurs aux rejets d'hydrocarbures dus aux activités pétrolières et gazières en offshore, et représentaient 97,8 % de la quantité totale d'hydrocarbures rejetés à la mer en 2004, quoique seulement 95,5 % en 2005 en raison d'une augmentation des déversements d'hydrocarbures. Le brûlage à la torchère n'est qu'une source mineure parmi les rejets d'hydrocarbures.

La quantité totale d'eau de production et d'eau de déplacement rejetée par jour a subi une légère augmentation mais toutefois sans conséquence pendant la période allant de 2001 à 2005. La *qualité de l'eau rejetée* (exprimée en teneur en hydrocarbures dispersés dans l'eau rejetée) est restée plus ou moins stable ces dernières années. En 2005, la moyenne annuelle de la teneur en hydrocarbures dispersés dans l'eau de production s'est élevée à 20,3 mg/l, moyenne nettement inférieure à la norme de performance alors valide, soit 40 mg/l, dans le cas des hydrocarbures dispersés dans l'eau de production rejetée à la mer.

Le *nombre d'installations qui ont dépassé la norme de performance de 40 mg/l* applicable aux hydrocarbures dispersés dans l'eau de production est passé de 20 en 2002 à 25 en 2005. En dépit des efforts accomplis pour réduire le nombre d'installations aux résultats médiocres, il existe encore des installations qui continuent de susciter des préoccupations.

Les rejets de *fluides de forage à phase organique (OPF)* (fluides n'étant pas à base d'hydrocarbures) ont augmenté quelque peu de 2003 à 2004, mais il n'y a pas eu de rejets d'OPF en 2005.

Depuis 2001, *l'utilisation et les rejets de produits chimiques* sont réglementés par OSPAR. La première année de notification au titre de laquelle tous les gros contributeurs ont communiqué des données fut 2003. La quantité totale de produits chimiques utilisés en offshore en 2005 s'est élevée à 776 819 tonnes. Seulement 5 poids % des produits chimiques utilisés contenaient soit des substances de la Liste OSPAR des produits chimiques devant faire l'objet de mesures prioritaires (LCPA), soit des substances qui sont candidates à la substitution.

La quantité totale de produits chimiques rejetés à la mer s'est élevée à environ 247 000 tonnes en 2005; près de 87% de cette quantité est constituée de produits chimiques inscrits sur la liste OSPAR des substances/préparations utilisées et rejetées en offshore, considérées comme ne présentant guère de risque pour l'environnement, voire aucun (Liste PLONOR). Les rejets à la mer de produits chimiques inscrits sur la LCPA se sont élevés à 0,221 tonnes.

Une tendance à la hausse des *émissions atmosphériques* a été décelée dans le passé. Au cours des 7 dernières années, la situation semble avoir légèrement évolué:

- Les émissions de SO<sub>2</sub> ont diminué de 1999 à 2002 mais ont ensuite légèrement augmenté;
- Les émissions de NO<sub>x</sub> et de CO<sub>2</sub> sont restées plus ou moins stables;
- Les émissions de méthane ont légèrement diminué depuis 2003 ;
- Le VOC hors méthane a considérablement baissé en 2005 comparé à 2003.

## 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 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<sup>1</sup> are applicable under the OSPAR Convention:

#### ***Discharges contaminated with oil***

- PARCOM Recommendation of a 40 mg/l Emission Standard for Platforms, 1986;<sup>2</sup>
- Sampling and analysis procedure for the 40 mg/l target standard (reference number: 1997-16; currently under review);
- OSPAR Reference Method of Analysis for the Determination of the Dispersed Oil Content in Produced Water (reference number: 2005-15)<sup>3</sup>
- 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);

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

<sup>2</sup> PARCOM Recommendation of a 40 mg/l Emission Standard for Platforms, 1986 was revoked (for produced water only) by OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations. However, this measure is still applicable in relation to ballast water, drainage water and displacement water from offshore installations.

<sup>3</sup> Replaced agreement 1997-16 from 1 January 2007

### **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.

## **1.2 Annual reporting and biannual assessments**

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 1980s 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 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.

This report presents the discharges, spills and emissions data from offshore installations for 2005 in Part A and cumulative data in Part B. The 2004 data (publication no. 296/2006) and the 2005 data are assessed in Section 2 below.

## **2. Assessment of data reported**

### **2.1 Introduction**

#### *Setting the scene*

The total number of installations with emissions and discharges in the OSPAR maritime area increased both in 2005 and in 2004 with 669 installations in 2005 compared to 653 in 2004, 592 in 2003 and 489 in 2000. Part of the 2003 – 2004 increase (~ 40 installations) is due to a change of the counting system of subsea installations in Norway in 2004.

The total production of hydrocarbons decreased by 11% in the period 2000-2005. The production increased in 2004 by 2% compared to 2003 but decreased in 2005 by 9% compared to 2004. The production of hydrocarbons decreased by 7% in 2005 compared to 2003<sup>4</sup>.

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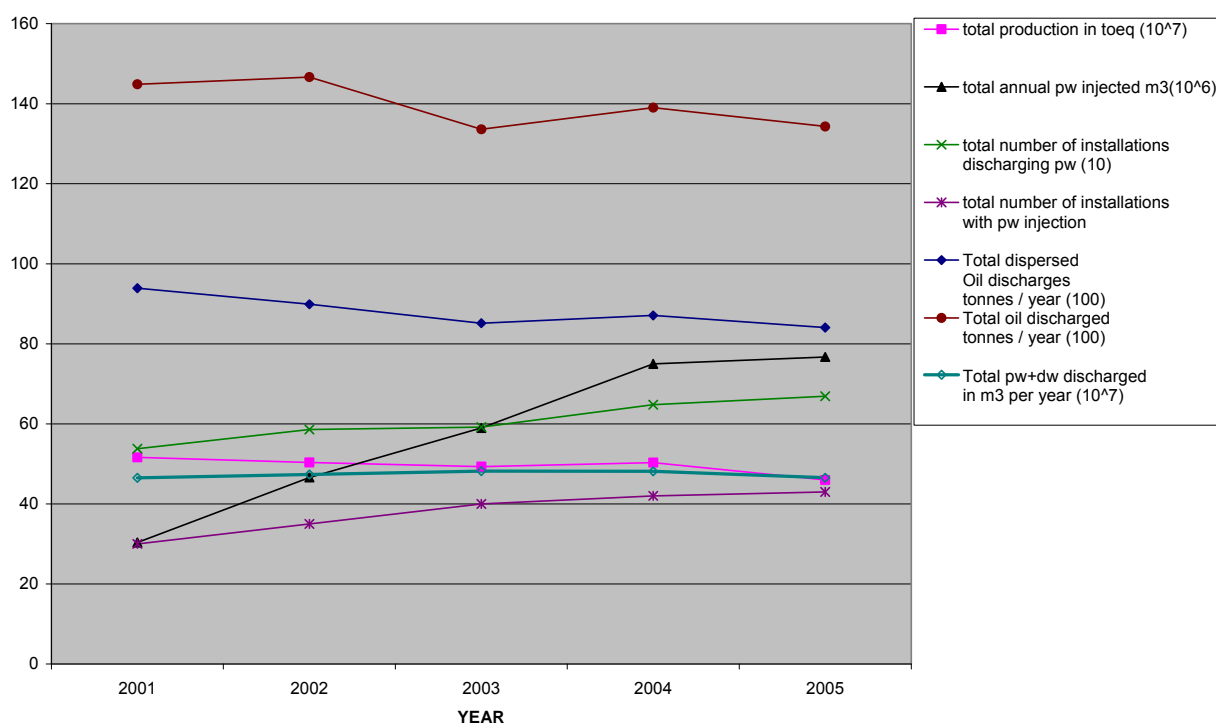
<sup>4</sup> 516 million tonnes of oil equivalent were produced in 2001, 503 in 2002, 493 in 2003, 503 in 2004 and 460 in 2005 (data reported by contracting parties).



However, even if the total production of hydrocarbons decreased in 2000-2005, the discharge of produced water increased by 4% in 2005 compared to 2001, but this increase was not significant. It stabilized at a level of 1,3 million m<sup>3</sup> per day, while the total number of installations injecting produced water increased from 30 in 2001 to 43 in 2005.

The total annual produced water injected increased from 30 million m<sup>3</sup> in 2001 to 77 million m<sup>3</sup> in 2005.

Total discharges of dispersed oil with produced water in the OSPAR maritime area decreased by about 5% in 2005 compared to 2000. In the next graph the achievement reached so far for the whole OSPAR Maritime Area for the period 2001 – 2005 is presented.



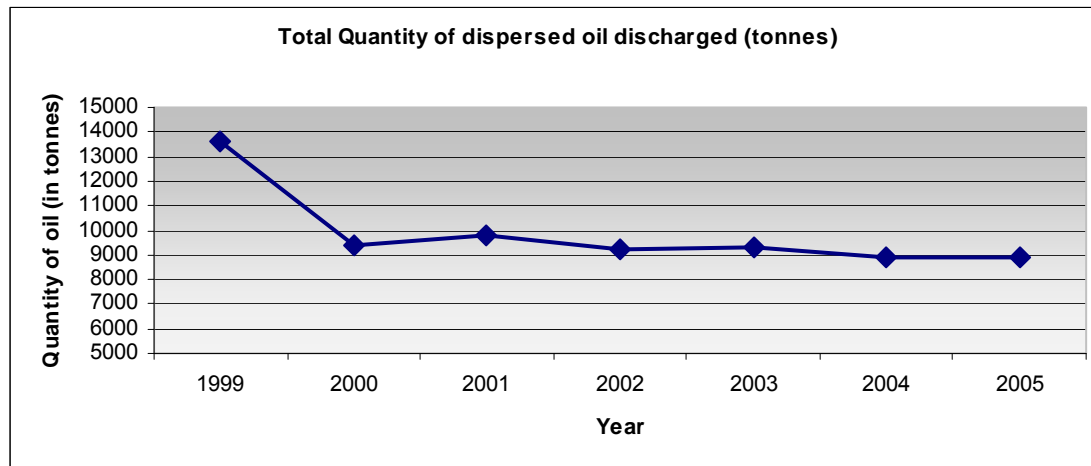
#### Data quality control

The use of the data collection format, harmonised sampling and analysis procedures, the Expert Assessment Panel and certified laboratories as well as implementing the OSPAR Recommendation 2003/5 on EMS should ensure transparency and harmonisation of what to report and how and contribute to the quality assurance of data collection and reporting.

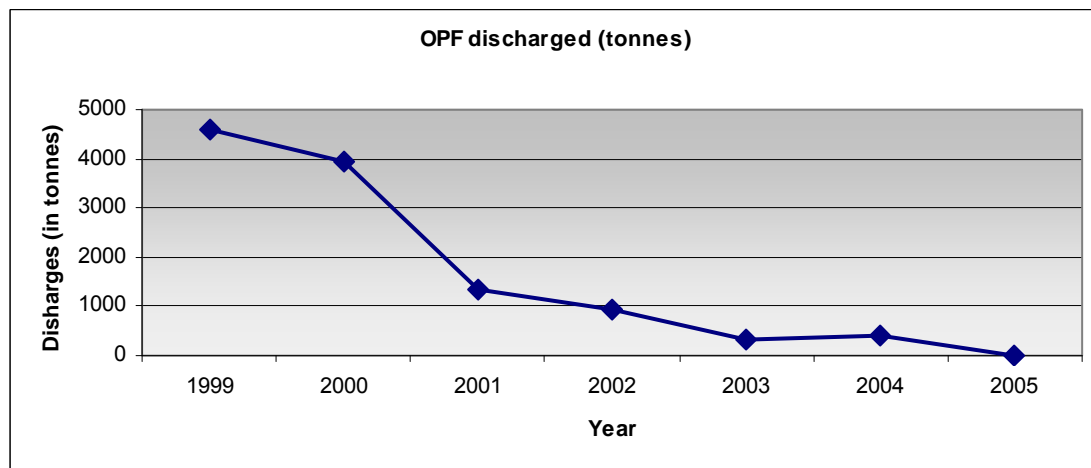
Some data used in the assessment may slightly differ from data previously published by OSPAR. This is due to the fact that the ongoing checking effort made by Contracting Parties led to the detection of a few errors. Data used in this assessment report are the best available data at the time the report was written.

## 2.2 Discharges of oil and organic phase fluids into the sea

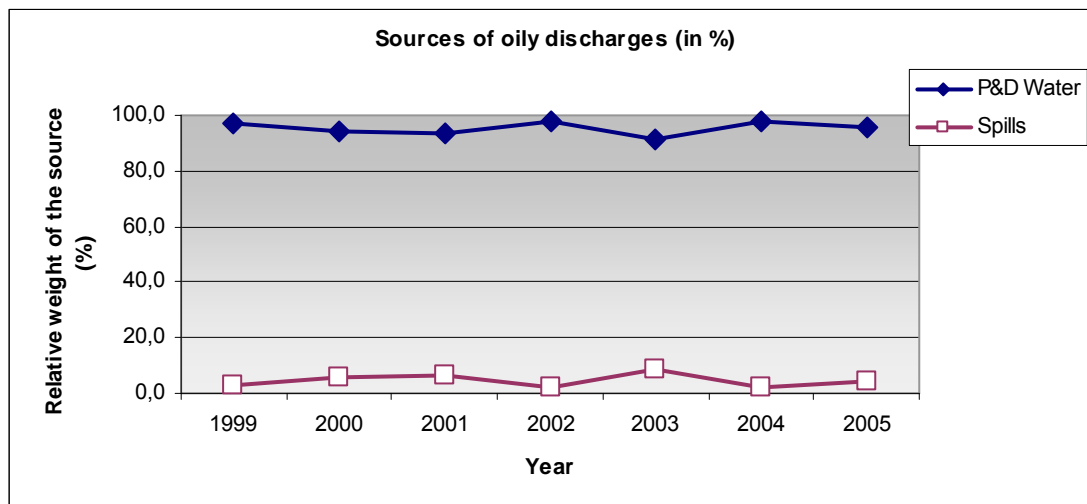
The total **quantity of dispersed oil discharged** into the maritime area of OSPAR (resulting from discharges of production and displacement waters, and from accidental spillage) was 9 019 tonnes in 2004 and 8 913 tonnes in 2005 *excluding* organic phase drilling fluids (OPF), compared to 9 341 tonnes in 2003 (see Section 3, part B, tables 2A, and 5B). The quantity of dispersed oil discharged by production and displacement waters increased in 2004 to 8 710 compared to 8 517 in 2003, while in 2005 it decreased again to 8 514 tonnes or -2%. It confirms a steady decreasing trend observed since 2000 from 9 258 down to 8 514 in 2005 or -8% for the whole OSPAR maritime area.



The amount of OPF discharged into the sea slightly increased in 2004 (425 tonnes in 2004 compared to 342 tonnes in 2003) but ceased in 2005.



In addition to the discharge of OPF through drill cuttings, three **sources of oily discharges** are reported: production and displacement waters (P&DW) and spills. As in the previous years, P&DW are by far the main contributors. Up to the last EAP report on 2002 – 2003 data oil spills due to flaring operations have been reported. Since 2003 it was decided not to report oil spills due to flaring operations as a separate source anymore, since this source was not of significance compared to the other two sources as shown here. Oil in produced and displacement water discharges represented 97,8 % of the total amount of oil discharged to the sea in 2004, but only 95,5 % in 2005 (due to the increase in oil spills: see table 5b, Part B).



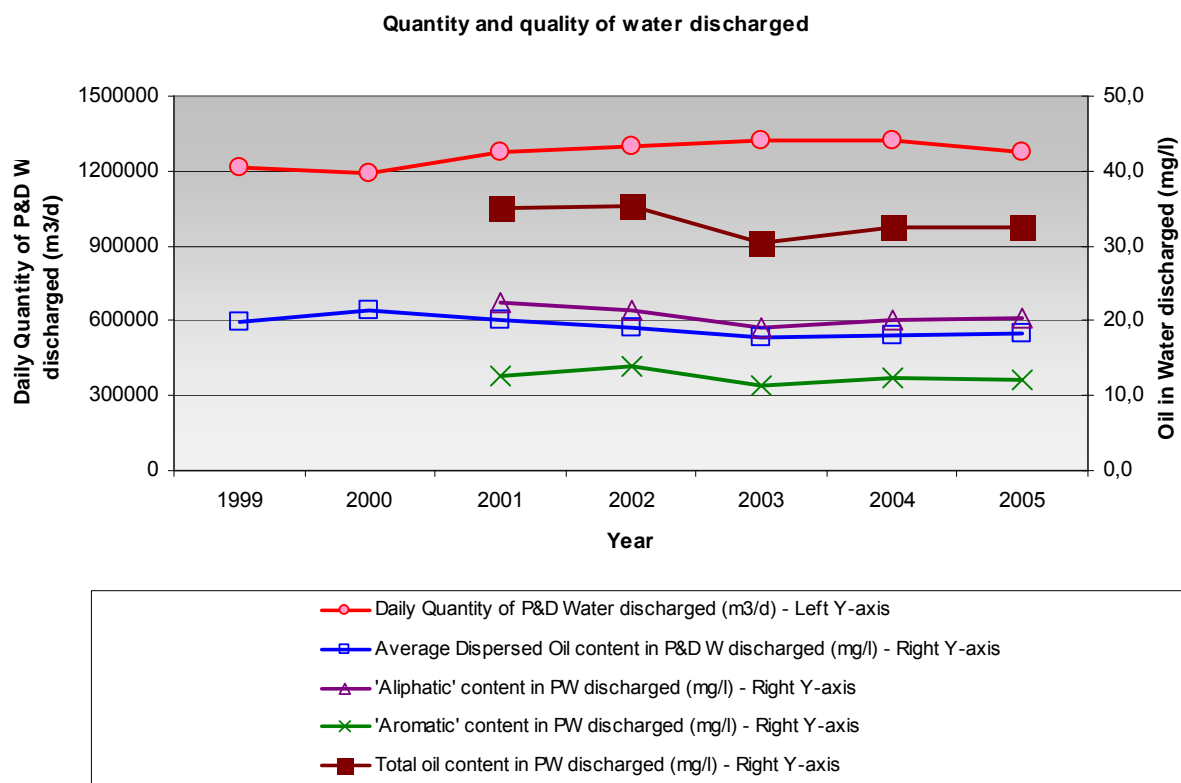
The **quality of the water discharged** (expressed in terms of content of dispersed/aliphatic hydrocarbons in the water discharged) roughly remained stable in 2004 and 2005: its 2004 and 2005 average was 18,0 mg/l for dispersed oil in produced & displacement water (P&DW) (table 3, part A).

Split between production and displacement waters, and between “aliphatics” or “aromatics” in produced water discharged show that:

- (1) the average “aliphatic” content in produced water only was 20,3 mg/l in 2005 (20,2 mg/l in 2004),
- (2) “aromatics” roughly represent nearly 40% of the total oil discharged.

Remarks:

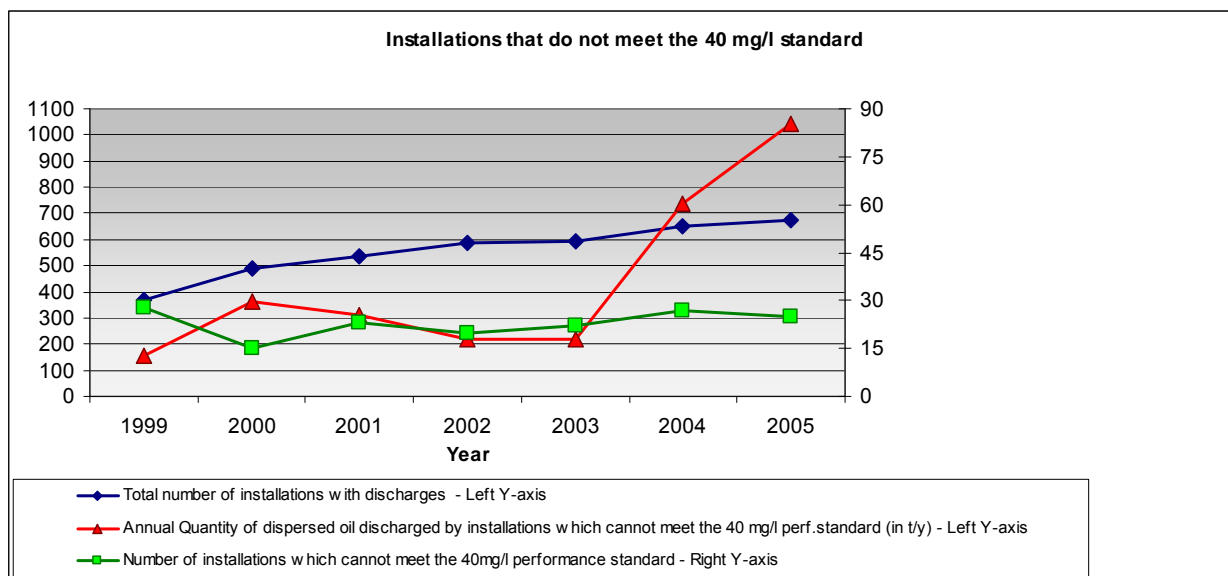
1. “Aliphatics” and “aromatics” are defined by the reference method set in OSPAR Agreement 1997-16 (Solvent extraction, Infra-Red measurement at 3 wavelengths). In that context, “aliphatics” and “dispersed oil” mean the same thing.
2. “Aliphatics” (or “dispersed oil”) are regularly and frequently measured, while the sampling frequency is much less for “aromatics”. Therefore data on “aromatics” are less reliable (at least for some contracting parties).
3. The average content of hydrocarbons in displacement waters is 8 to 10 times lower than their content in produced water.



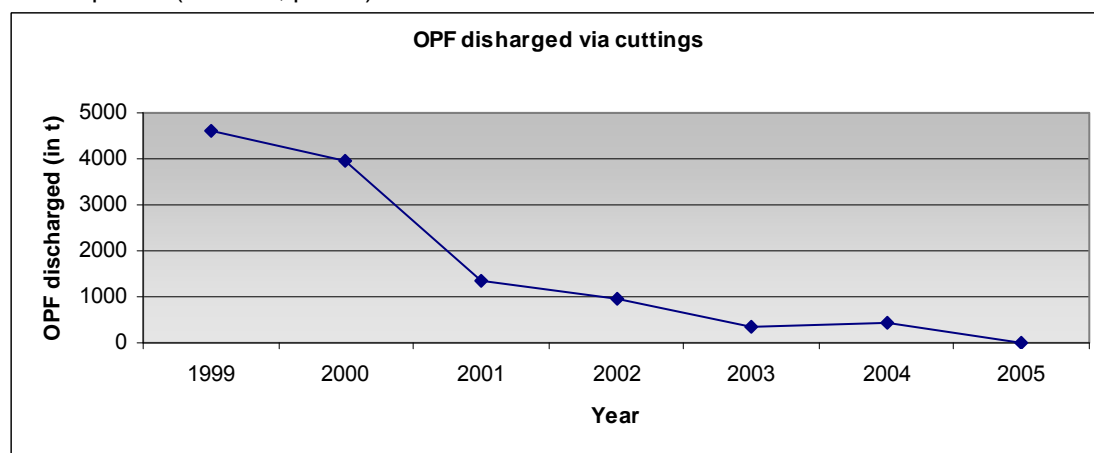
The number of installations which exceeded the 40 mg/l target standard for dispersed oil in 2004 – 2005 increased since the period 2002-2003: 20 in 2002, 22 in 2003, versus 28 in 2004 and 25 in 2005 (table 3a, part B). The **total quantity of hydrocarbons** discharged by these installations increased significantly from 217 tonnes in 2003 to 737 tonnes in 2004, and 1 044 tonnes in 2005. About 300 tonnes of this amount of dispersed oil discharged from the 25 exceeding installations in 2005 are due to the exceeding the 40 mg/l target standard.

Remark: This overall picture does not reflect the wide spectrum of cases: in 2005, out of the 25 installations concerned, 10 discharged less than 2 tonnes; and only 4 over 100 tonnes. Some installations are still equipped with simple devices while other are equipped with significantly more sophisticated treatment units (e.g. hydrocyclones, filter coalescers) (table 3, part A).

It shows that despite the efforts made to reduce the number of installations which have poor records, there are still some installations which raise significant concern.



In 2004 and 2005, there has been no discharge of oil-based drillings fluids (OBF) and OBFcontaminated cuttings. Due to the implementation of OSPAR Decision 2000/3, **oil discharged via cuttings** is entirely related to the use and discharge of non-OBM OPF. The hydrocarbons discharged *via* the use of OPF increased from 342 tonnes in 2003 to 425 tonnes in 2004. In 2005 no discharges of non-OBF OPF has been reported (table 4a, part A).



**Spillage:** 199 tonnes of oil were spilled in 2004, and 399 in 2005, compared to 824 in 2003. The bad record of 2003 is explained by the occurrence of a few significant spills, while 2004 data are the best ever recorded (table 5b, Part B).

**Flaring:** flaring is a very minor contributor to the total discharge of oil, and is not covered by OSPAR measures. Only 4,2 tonnes were reported in 2003. Specific report on this source of oil discharges by Contracting Parties ceased in 2004.

## 2.3 Chemicals

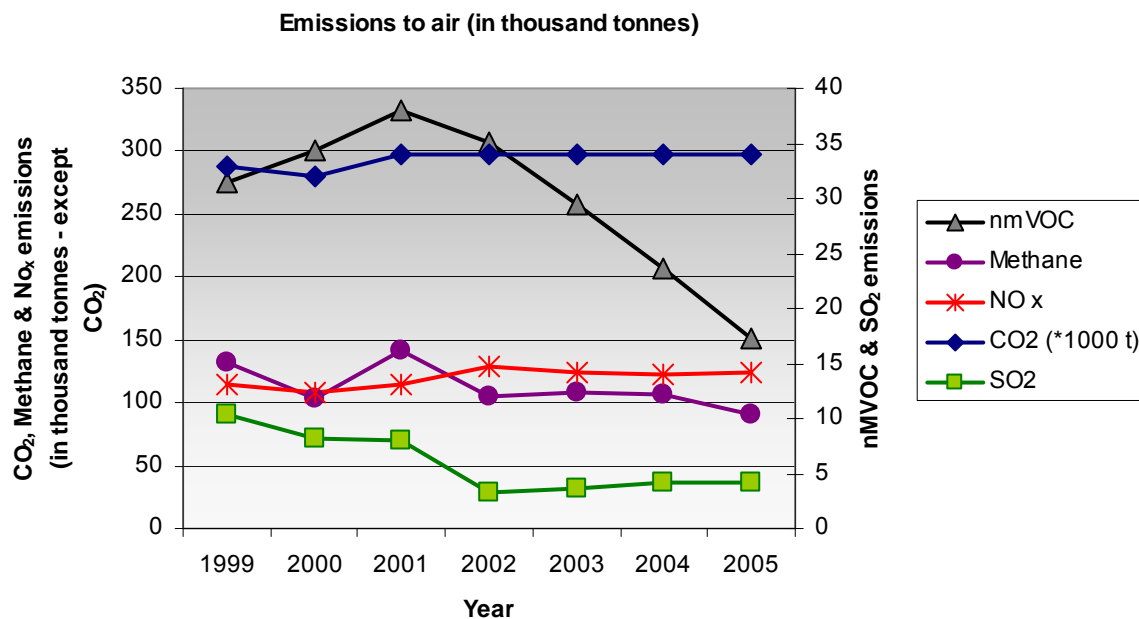
Since 2001 onwards, use and discharge of chemicals have been covered by OSPAR measures. Total quantity of chemicals *used* offshore in 2005 is 776 819 tonnes out of which 74% weight are on the PLONOR<sup>5</sup> list and other 21 weight % contain no substances which are candidates for substitution. Only 5 weight % of the chemicals used do contain either substances listed on the List of Chemicals for Priority Action (LCPA) or substances which on the basis of the HMCS pre-screening criteria are candidates for

<sup>5</sup> PLONOR list: OSPAR list of substances/preparations used and discharged offshore which are considered to **Pose Little OR NO Risk** to the environment (OSPAR Agreement 2004-10).

substitution (table 7a, part A). Total quantity of chemicals discharged into the sea in 2005 was roughly 247 000 tonnes (table 7b, part A), almost 87 % being listed on the PLONOR list (mainly weighting agents for muds) and other 11 weight % are chemicals not containing candidates for substitution. Only 2 weight % of the discharged chemicals contain LCPC substances or substances candidate for substitution. The amount of LCPC substances used remained at the same level from 2003 (3,8 tonnes) to 2005 (3,5 tonnes) however the discharge went down from 0,742 tonne in 2003 to 0,221 tonne in 2005. The discharge of chemicals containing substances that are candidates for substitution increased from about 4 000 tonnes in 2003 to roughly 4 500 tonnes in 2005.

**Spillage:** In addition 1 973 tonnes of chemicals were accidentally spilled in 2005 (table 7c, Part A), compared to 1 520 tonnes in 2003. The increase in the 2005 figures has not been explained by the relevant Contracting Parties, so no conclusion about the reason can be given.

## 2.4 Emissions to air



Emissions to air are not covered by OSPAR measures. Consistencies in and quality of the data reported have undoubtedly improved over the past few years.

An increasing trend of all releases into air had been identified in the past. During the last five years, the picture seems to have slightly changed:

- Non methane VOC (nmVOC) and methane emissions significantly decreased in 2005 compared to 2003. This change is related to the extra measures taken in the UK and Norway, i.e. the implementation of Vapour Recovery Systems on off loading facilities
- Methane emissions also decreased in 2005 compared to 2003. This change is also related to the extra measures taken by the UK and Norway, i.e. the implementation of Vapour Recovery Systems on off loading facilities
- SO<sub>2</sub> increased slightly in 2004 – 2005 compared to 2003
- NO<sub>x</sub> and CO<sub>2</sub> remain more or less stable

In interpreting these changes, one must take into account factors which have a direct influence on atmospheric emissions, i.e. like the ageing of the fields, which globally induces a higher consumption of energy (e.g. additional compression) which, in return, leads to increase atmospheric emissions. These factors may partly hide the effect of the measures taken to reduce air emissions.

### 3. Results

**Part A: Report relating to 2005 data**

**Part B: Cumulative Report**

#### 3.1 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.

#### 3.2 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 2005 data

**Table 1: Number of installations with emissions and discharges covered by OSPAR measures <sup>A</sup>**

**Year: 2005**

Country	Production <sup>B</sup>		Subsea <sup>E</sup>	Drilling <sup>F</sup>	Other <sup>G</sup>	Total
	Oil <sup>C</sup>	Gas <sup>D</sup>				
Denmark	12	0	1	3,8	0	16,8
Germany	1	2	0	0,548	0	3,548
Ireland	0	2	3	0	1	6
Netherlands	8	102	9	10	0	129
Norway <sup>(1), (2)</sup>	47	6	33	13,6	8	107,6
Spain <sup>(3), (4), (5)</sup>	0	0	0	0	1	1
United Kingdom	80	145	138	43	1	407
<b>Total</b>	<b>148</b>	<b>257</b>	<b>184</b>	<b>71</b>	<b>11</b>	<b>671</b>

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) Norway: this includes 1 storage ship, 1 riser platform and 6 loading buoys**

**(2) Norway: there is one new subsea field on stream in 2005**

**(3) Spain: drilling : no drilling activities in 2005 in the OSPAR area**

**(4) Spain: other: underground storage; Gaviota field**

**(5) Spain: subsea: no discharges from the 4 subsea installations in the OSPAR area**

## Part A: Report relating to 2005 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: 2005**

**Table 2a: Produced water <sup>A</sup>**

Country	Total number of installations <sup>B</sup>	Annual quantity of water discharged <sup>C</sup> m <sup>3</sup>	Annual average oil content (mg/l)			Total amount of oil discharged (tonnes)			Number of installations injecting water <sup>F</sup>	Annual quantity of water injected <sup>F</sup> m <sup>3</sup>
			dissolved <sup>D</sup>	dispersed <sup>D</sup>	total <sup>E</sup>	dissolved <sup>D</sup>	dispersed <sup>D</sup>	total <sup>E</sup>		
Denmark	10	23 177 288	15	19,2	34,2	347,8	445,5	793,3	3	12 225 001
Germany	1	7 953	93,29	16,89	110,18	0,758	0,145	0,903	1	183 917
Ireland	1	2 558	8,64	6,15	14,79	0,022	0,016	0,038	0	0
Netherlands	69	8 860 547	8	12	20	70	108	178	4	7 050 010
Norway	41	147 269 373	10,3	19,5	29,8	1 524	2 871	4 395	19	32 569 423
Spain <sup>1</sup>	0	0	0	0	0	0	0	0	1	2 926
United Kingdom	107	234 548 034	13	21	34	3 049	4 968	8 017	16	24 862 312
<b>Total</b>	<b>229</b>	<b>413 865 753</b>	<b>12,1</b>	<b>20,3</b>	<b>32,3</b>	<b>4 992</b>	<b>8 393</b>	<b>13 384</b>	<b>44</b>	<b>76 893 589</b>

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).

<sup>1</sup> The cause is the water formation in Gaviota.

## Part A: Report relating to 2005 data

**Table 2b: Displacement water <sup>A</sup>**

**Year: 2005**

Country	Total number of installations <sup>B</sup>	Annual quantity of water discharged <sup>C</sup> m <sup>3</sup>	Annual average oil content (mg/l)			Total amount of oil discharged (tonnes)			Number of installations injecting water <sup>F</sup>	Annual quantity of water injected <sup>F</sup>
			dissolved <sup>D</sup>	dispersed <sup>D</sup>	total <sup>E 1</sup>	dissolved <sup>D</sup>	dispersed <sup>D</sup>	total <sup>E 2</sup>		
Denmark	2	4 023 298	NI	NI	1,8	NI	NI	7,3	0	0
Germany	0	0	0	0	0	0	0	0	0	0
Ireland	0	0	0	0	0	0	0	0	0	0
Netherlands	1	0	0	0	0	0	0	0	1	1 006 829
Norway	6	47 403 128	NI	2,5	25	NI	119	119	0	0
Spain	0	0	0	0	0	0	0	0	0	0
United Kingdom	1	135 010	9	14	23	1	2	3	0	0
<b>Total</b>	<b>10</b>	<b>51 561 436</b>	<b>0,0</b>	<b>2,3</b>	<b>2,5</b>	<b>1</b>	<b>121</b>	<b>129</b>	<b>1</b>	<b>1 006 829</b>

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 quantity 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 2005 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: 2005**

Country/ Installation <sup>A</sup>	Type of installation <sup>B</sup>	Type of water treatment equipment <sup>C</sup>	Quantity of water discharged during the year (10 <sup>3</sup> m <sup>3</sup> )	Annual average oil content <sup>D</sup> (mg/l)			Total amount of oil discharged (tonnes per year) <sup>E</sup>		
				dissolved	dispersed	total	dissolved	dispersed	total
Norway/Brage	Oil	Hydrocyclone degassing tank, Epcon CFU	4818	16	60	76	77,0	288,0	365,0
Norway Grane	Oil	Hydrocyclone degassing tank	129	4	91	95	1,0	12,0	13,0
Norway/Oseberg A	Oil	Oily water separator, flotation unit	2 167	25	67	92	54,0	145,0	199,0
Norway Heidrun	Oil	Oily water separator, Hydrocyclones, degassing tank	325	4	71	75	1,0	23,0	24,0
UK/Britannia Operator - Britannia	Oil	Hydrocyclones/DGF unit	448	42	43	85	18,8	19,2	38,0
UK/Pallidin - Montrose Alpha	Oil	Hydrocyclones/DGF unit	589	6	46	53	3,7	27,3	31,0
UK/Talisman - Montrose Alpha	Oil	Hydrocyclones/DGF unit	75	6	44	50	0,5	3,3	3,8
UK/Total - Alwyn North B	Oil	Hydrocyclones/DGF unit	2304,8	39	48	87	90,3	110,5	200,8
UK/Talisman - Beatrice alpha	Oil	Hydrocyclones/DGF unit	5199,2	20	46	66	104,5	241,2	345,7
UK/Talisman - Buchan Alpha	Oil	Hydrocyclones/DGF unit	633	12,5	42	54	7,93	26,56	34
UK/Talisman - Bleo Holm	Oil	Hydrocyclones/DGF unit	1804	11,6	52	64	20,97	94,40	115
UK/BP- North Everest	Gas	Hydrocyclones/DGF unit	38,7	52,9	71	124	2,05	2,75	5
UK/BP- Ravenspurn North	Gas	Three Phase Separator	16	150	448	598	2,38	7,10	9
UK/BP - West Sole Alpha	Gas	Three Phase Separator	4	82	52	134	0,31	0,20	1
UK/BP- West Sole Charlie	Gas	Three Phase Separator	6,4	114	44	158	0,73	0,28	1
UK/Centrica Storage- Rough 47/8A	Gas	Separator/Degasser	0	68	54	122	0,01	0,01	0
UK/Superior Oil - Guinevere	Gas	Separator/Degasser	1	131,8	42	174	0,07	0,02	0
UK/Superior Oil - Thames Production Platform	Gas	PW skimmer/Tilted Plate Separator	36	41,5	338	379	1,50	12,19	14
UK/Perenco - Inde 49/23-A	Gas	Horizontal Gravity Separator	24	104,0	81	185	2,48	1,93	4
UK/Perenco - Trent 043/24	Gas	Scrubbers, Coalescer and Degasser	1	929,0	492	1421	1,06	0,56	2
UK/Perenco - Tyne 044/18	Gas	Scrubbers, Coalescer and Degasser	0	929,0	573	1502	0,26	0,16	0
UK/Perenco - Waveney	Gas	Scrubbers, Coalescer and Degasser	0	104,0	373	477	0,02	0,08	0
UK/Shell - Leman Alpha	Gas	Gravity Separator	19,8	27,0	96	123	0,53	1,89	2
UK/Shell - Sean Papa	Gas	Gravity Separator	12,79	100,0	57	157	1,28	0,73	2
UK/Shell- Solepit Clipper PT	Gas	Gravity Separator	46	21,6	548	569	1,00	25,33	26
<b>Total</b>			<b>18 698</b>	<b>21,0</b>	<b>55,8</b>	<b>76,9</b>	<b>393</b>	<b>1 044</b>	<b>1 437</b>

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 2005 data

**Table 4: Use and discharges of organic-phase drilling fluids (OPF) <sup>A</sup>**

**Year: 2005**

**Table 4a: Use and discharges of oil-based fluids (OBF) <sup>B</sup>**

Country	Total amount of OBF used (tonnes)	Cuttings discharged to the sea			OPF cuttings injected		Cuttings transported to shore <sup>E</sup> (tonnes)
		Number of wells concerned	Average oil concentration on cuttings (g/kg)	Total amount of oil discharged <sup>C</sup> (tonnes)	Number of wells concerned	Total amount of cuttings injected <sup>D</sup> (tonnes)	
Denmark	2 400	0	0	0	0	0	2 897
Germany	4 333	0	0	0	0	0	1 749
Ireland	0	0	0	0	0	0	0
Netherlands	17 205	0	0	0	0	0	9 280
Norway	217 852	0	0	0	80	60 242	20 287
Spain	0	0	0	0	0	0	0
United Kingdom	72 617	0	0	0	9	2 680	23 551
<b>Total OBF</b>	<b>314 407</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>89</b>	<b>62 922</b>	<b>57 764</b>

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.

## Part A: Report relating to 2005 data

**Table 4b: Use and discharges of non-OBF organic-phase drilling fluids (non-OBF OPF) <sup>A</sup>**

**Year: 2005**

Country	Total amount of non-OBF OPF used (tonnes)	Cuttings discharged to the sea			OPF cuttings injected		Cuttings transported to shore <sup>D</sup> (tonnes)
		Number of wells concerned	Average organic phase concentration on cuttings (g/kg)	Total amount organic phase fluids discharged <sup>B</sup> (tonnes)	Number of wells concerned	Total amount of cuttings injected <sup>C</sup> (tonnes)	
Denmark	0	0	0	0	0	0	0
Germany	0	0	0	0	0	0	0
Ireland	0	0	0	0	0	0	0
Netherlands	0	0	0	0	0	0	0
Norway	5 303	0	0	0	0	0	930
Spain	0	0	0	0	0	0	0
United Kingdom	0	0	0	0	0	0	0
<b>Total non-OBF OPF</b>	<b>5 303</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>930</b>
<b>Grand total OPF <sup>E</sup></b>	<b>319 710</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>89</b>	<b>62 922</b>	<b>58 694</b>

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 2005 data

**Table 5: Accidental spillages**

**Year: 2005**

**Table 5a: Accidental spillages of oil**

Country	Number of oil spills		
	≤ 1 tonne	> 1 tonne	Total number
Denmark	44	1	45
Germany	0	0	0
Ireland	0	0	0
Netherlands	25	0	25
Norway	141	6	147
Spain	0	0	0
United Kingdom	428	10	438
<b>Total</b>	<b>638</b>	<b>17</b>	<b>655</b>

Quantity of oil spilled (tonnes)		
≤ 1 tonne	> 1 tonne	Total number
3	3	6
0	0	0
0	0	0
0,2	0,0	0,2
13	303	316
0	0	0
38	39	77
<b>54,2</b>	<b>345,0</b>	<b>399,2</b>

**Table 5b: Accidental spillages of chemicals <sup>A</sup>**

Country	Number of chemical spillages		
	≤ 1 tonne	> 1 tonne	Total number
Denmark	0	0	0
Germany	0	0	0
Ireland	0	0	0
Netherlands	3	1	4
Norway	93	37	130
Spain	0	0	0
United Kingdom	48	19	67
<b>Total</b>	<b>144</b>	<b>57</b>	<b>201</b>

Quantity of chemicals spilled (tonnes)		
≤ 1 tonne	> 1 tonne	Total number
0	0	0
0	0	0
0	0	0
0,5	94,6	95,1
20	522	542
0	0	0
5	308	313
<b>25,5</b>	<b>924,6</b>	<b>950,1</b>

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

## Part A: Report relating to 2005 data

**Table 6: Emissions to air**

**Year: 2005**

Country	CO <sub>2</sub> <sup>A</sup> (10 <sup>3</sup> tonnes)	NO <sub>x</sub> <sup>B</sup> (10 <sup>3</sup> tonnes)	nmVOCs <sup>C</sup> (10 <sup>3</sup> tonnes)	CH <sub>4</sub> <sup>D</sup> (10 <sup>3</sup> tonnes)	SO <sub>2</sub> (10 <sup>3</sup> tonnes)
Denmark	2 091	6,5	4,3	5,6	0,23
Germany	59,4	0,139	0,291	1,161	0,002
Ireland	60,20	0,145	0,0011	0,288	0,00076
Netherlands	1 337	3,81	3,7	12,3	0,14
Norway	11 874	54,4	93,5	29,3	0,7
Spain (1)	61,6	0,1288	0,1285	0,385	0,00031
United Kingdom	18 210	59,0	49,0	41,0	3
<b>Total</b>	<b>33 693</b>	<b>124</b>	<b>151</b>	<b>90</b>	<b>4,1</b>

A. CO<sub>2</sub> is carbon dioxide emitted, not the carbon dioxide equivalents of the various greenhouse gases. Carbon monoxide (CO) is not included.

B. NO<sub>x</sub> is the sum of nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>) expressed as NO<sub>2</sub> equivalent. Nitrous oxide (N<sub>2</sub>O) is not included as a component of NO<sub>x</sub>.

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

D. CH<sub>4</sub> corresponds to the methane released to the atmosphere, from any source.

(1) Spain: emissions from Gaviota



## Part A: Report relating to 2005 data

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

**Year: 2005**

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

Country	Plonor <sup>B</sup>	"LCPA" <sup>C</sup>	Prescreening Category <sup>A</sup>				Ranking <sup>H</sup>	Total
			LC <sub>50</sub> or EC <sub>50</sub> < 1 mg/l <sup>D</sup>	Biodegradation < 20 % <sup>E</sup>	Substances meet two of three criteria <sup>F</sup>	Inorganic, LC50 or EC50 > 1 mg/l <sup>G</sup>		
Denmark	41 208 531	0	8 115	894 141	1 322 226	12 738 121	14 093 489	<b>70 264 623</b>
Germany	2 138 463	0	0	4100	2 631 107	4 125	387 282	<b>5 165 077</b>
Ireland	9 287	0	0	0	0	0	0	<b>9 287</b>
Netherlands <sup>(1)</sup>	35 679 877	0	0	3 433 667	8 972 101	1 916 271	2 809 975	<b>52 811 891</b>
Norway	228 476 000	1 000	0	3 066 300	3 428 700	2 671 000	82 626 000	<b>320 269 000</b>
Spain	0	0	0	0	0	0	0	<b>0</b>
United Kingdom	271 496 796	2 505	10333	7 244 942	4 630 943	73 409	44 840 086	<b>328 299 014</b>
<b>Total</b>	<b>579 008 954</b>	<b>3 505</b>	<b>18 448</b>	<b>14 643 150</b>	<b>20 985 077</b>	<b>17 402 926</b>	<b>144 756 832</b>	<b>776 818 892</b>

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<sub>50</sub> or EC<sub>50</sub> 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) NL reported to have used 2 333 326 kg of unknown chemicals

## Part A: Report relating to 2005 data

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

**Year: 2005**

Country	Plonor <sup>B</sup>	"LCPA" <sup>C</sup>	Prescreening Category <sup>A</sup>				Ranking <sup>H</sup>	Total
			LC <sub>50</sub> or EC <sub>50</sub> < 1 mg/l <sup>D</sup>	Biodegradation < 20 % <sup>E</sup>	Substances meet two of three criteria <sup>F</sup>	Inorganic, LC50 or EC50 > 1 mg/l <sup>G</sup>		
Denmark	28 296 022	0	54	106 127	319 223	138 620	3 223 911	<b>32 083 957</b>
Germany	1 036 263	0	0	4 100	9 316	4125	41 275	<b>1 095 079</b>
Ireland	2 566	0	0	0	0	0	0	<b>2 566</b>
Netherlands <sup>(1)</sup>	12 099 786	0	0	42 716	16 560	172 416	193 412	<b>12 524 890</b>
Norway	56 370 000	30	0	62 270	33 985	137 000	10 103 000	<b>66 706 285</b>
Spain	0	0	0	0	0	0	0	<b>0</b>
United Kingdom	117 027 290	191	10 306	1 889 783	1 399 510	64 902	14 056 179	<b>134 448 161</b>
<b>Total</b>	<b>214 831 927</b>	<b>221</b>	<b>10 360</b>	<b>2 104 996</b>	<b>1 778 594</b>	<b>517 063</b>	<b>27 617 777</b>	<b>246 860 938</b>

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<sub>50</sub> or EC<sub>50</sub> 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<sub>50</sub> < 10mg/l or EC<sub>50</sub> < 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) NL reported to have discharged 209 050 kg of unknown chemicals.

## Part A: Report relating to 2005 data

**Table 7c: Quantity of offshore chemicals spilled in kg/year**

**Year: 2005**

Country	Prescreening Category <sup>A</sup>							Total
	Plonor <sup>B</sup>	"LCPA" <sup>C</sup>	LC <sub>50</sub> or EC <sub>50</sub> < 1 mg/l <sup>D</sup>	Biodegradation < 20 % <sup>E</sup>	Substances meet two of three criteria <sup>F</sup>	Inorganic, LC50 or EC50 > 1 mg/l <sup>G</sup>	Ranking <sup>H</sup>	
Denmark	NA	0	NA	NA	NA	NA	NA	NA
Germany	0	0	0	0	0	0	0	0
Ireland	0	0	0	0	0	0	0	0
Netherlands	48 637	0	0	0	28	0	4 663	53 328
Norway	409 000	0	0	2 900	2 500	NI	21	414 421
Spain (1) (2) (3)	0	0	0	0	0	0	0	0
United Kingdom	707 209	20		706 209	28	0	91 475	1 504 941
<b>Total</b>	<b>1 164 846</b>	<b>20</b>	<b>0</b>	<b>709 109</b>	<b>2 556</b>	<b>0</b>	<b>96 159</b>	<b>1 972 690</b>

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<sub>50</sub> or EC<sub>50</sub> 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<sub>50</sub> < 10mg/l or EC<sub>50</sub> < 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.

## **Part B: Cumulative Report**

## Part B: Cumulative Report

**Table 1: 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, 1984-2005\***

Country	1984	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Denmark	7	20	20	20	10,5	8	8,23	9	12	15	16	16	19	17	19	20	17
France <sup>1</sup>	0	0	0	0	0	0	0,1	0	0	0	0	0	0	0	0,1	0	0,0
Germany	1	3	3	4	2	1	1	2	2	2	3	3	3	2	2	3	4
Ireland	1	2	2	2	0	0	0	4	5	2,2	2,5	2,5	4	4	NI	6	6
Netherlands	30	63	60	88	97	103,5	114,93	113,8	106,3	104,1	105	108	114	114	123	124	129
Norway <sup>2</sup>	13	24	25	34	93	90	83	61	53	54	59	60	65	67	63	103	108
Spain	1	1	1	1	1	1,5	9	5	2	0	0	1	1	1	1	1	1
UK <sup>3</sup>	90	79	79	79	81	152	169	193	164	218	186	298	332	381	383	396	407
<b>Total</b>	<b>143</b>	<b>192</b>	<b>190</b>	<b>228</b>	<b>284,5</b>	<b>356</b>	<b>385,26</b>	<b>387,8</b>	<b>344,3</b>	<b>395,3</b>	<b>371,5</b>	<b>488,5</b>	<b>538</b>	<b>586</b>	<b>592</b>	<b>653 <sup>2</sup></b>	<b>671</b>

**Table 1b <sup>4</sup>: Total number of installations in the OSPAR maritime area, 1984-2005\*\***

	1984	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>Total</b>	NI	NI	NI	NI	320	438	459	554	520	560	587	591	NI	1070	1131 <sup>3</sup>	1130	1281

<sup>1</sup> France had 1 exploratory well in 1995, and 1 in 2003.

<sup>2</sup> The fact that Norway reports subsea installations for the first time in 2004 leads to an artificial significant increase in the total.

<sup>3</sup> UK has revised its criteria for counting subsea installations as from 2000.

<sup>4</sup> 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, 1993-2005 \***

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Oil	88	104	99	133	120	135	137	174	152	153	146	148	148
Gas	148	183	204	207	171	164	186	239	223	225	254	257	257
Subsea	6	6	75	5	6	87	44	6,5	81	120	143	179	184
Drilling	43	63	7	43	47	9	4	69	76	86	45	58	71
Other	0	0	0	0	0	0	0	0	5	2	4	11	11
<b>Total</b>	<b>285</b>	<b>356</b>	<b>385</b>	<b>388</b>	<b>344</b>	<b>395</b>	<b>371</b>	<b>489</b>	<b>537</b>	<b>586</b>	<b>592</b>	<b>653</b>	<b>671</b>

\* 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), 1984-2005**

Country	1984	1990	1994	1996	1998	2000	2001	2002	2003	2004	2005
							Dispersed	Dispersed	Dispersed	Dispersed	Dispersed
Denmark	57	36	138	164	174	271	290	294	358	431	446
Germany	NI	NI	0	0	0	0,045	0,22	0,17	0,20	0,20	0,15
Ireland	NI	NI	NI	0	0,02	0,245	NI	NI	NI	0,12	0,02
Netherlands	76	262	265	249	204	189	252	148	114	119	108
Norway	154	460	1 009	1 750	2 492	3 047	3 153	2 827	2 769	2 881	2 990
Spain	0	0,065	0	0	0	0	0	0	0	0	0
UK	1 430	3 187	4 615	5 784	5 692	5 751	5 694	5 721	5 276	5 279	4 970
<b>Total</b>	<b>1 717</b>	<b>3 945</b>	<b>6 027</b>	<b>7 947</b>	<b>8 562</b>	<b>9 258</b>	<b>9 390</b>	<b>8 990</b>	<b>8 517</b>	<b>8 710</b>	<b>8 514</b>

### Dissolved from 2001

Country	2001	2002	2003	2004	2005
	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved
Denmark	205	192	265	292	348
Germany	0,32	0,42	0,50	0,80	0,76
Ireland	NI	NI	NI	0,38	0,02
Netherlands	82	57	72	76	70
Norway	1 101	1 165	906	1 547	1 524
Spain	0	0	0	0	0
UK	3 710	4 260	3 599	3 276	3 049
<b>Total</b>	<b>5 098</b>	<b>5 674</b>	<b>4 843</b>	<b>5 192</b>	<b>4 992</b>

**Table 2b: Quantity of displacement and produced water discharged daily to the sea (in m<sup>3</sup>/day), 1984-2005**

Country	1984	1990	1994	1996	1998	2000	2001	2002	2003	2004	2005
Denmark	NI	NI	14 247	13 425	18 000	43 909	46 273	44 158	54 243	67 578	74 522
Germany			0	0	0	14	14	19	18	22	22
Ireland			NI	7	6,69	6	7	8	NI	8	7
Netherlands			35 105	35 214	30 303	31 820	38 117	24 263	21 381	23 313	24 275
Norway			316 029	412 283	462 969	461 323	493 342	490 826	524 910	537 342	533 349
Spain			NI	0	0	0	0	0	0	0	0
UK			512 657	567 540	693 151	652 188	696 482	738 082	719 950	690 481	642 967
<b>Total</b>			<b>878 038</b>	<b>1 028 469</b>	<b>1 204 430</b>	<b>1 189 260</b>	<b>1 274 236</b>	<b>1 297 356</b>	<b>1 320 502</b>	<b>1 318 745</b>	<b>1 275 143</b>

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

The data for 1992, 1995, 1997 and 1999 are available in previous reports.

## Part B: Cumulative Report

**Table 3: Installations which do not meet OSPAR performance standard for dispersed oil in aqueous discharges<sup>A \*</sup>**

**Table 3a<sup>B</sup>: Number of installations with discharges exceeding the 40 mg oil/l performance standard, 1984-2005, 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	2005
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	671
Number of installations exceeding 40 mg/l	12	70	68	65	64	59	46	45	32	39	28	15	23	20	22	28	25
Quantity of dispersed oil <sup>1</sup> discharged	601	2701	2027	4299	1017	1724	2429	840	607	420	153	365	312	216	217	737	1044

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<sup>B</sup>: Number of installations with discharges exceeding the 40 mg oil/l performance standard, 1994-2005, by Contracting Party, and quantity of oil discharged by these installations (in tonnes)**

Country	1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005	
	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 <sup>C</sup>	Number of instal-lations	Amount dis-charged <sup>C</sup>	Number of instal-lations	Amount dis-charged <sup>C</sup>	Number of instal-lations	Amount dis-charged <sup>C</sup>
Denmark	1	3	0	0	2	2	1	4	2	27	2	29	2	42	1	6	0	0	1	52	0	0	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	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	0	0
Netherlands	22	17	20	31	16	5	10	5	10	5	7	4	5	2	3	1	5	2	4	3	0	0	0	0
Norway	6	187	4	40	3	32	2	46	3	26	2	22	2	81	2	95	1	82	0	0	3	344	4	468
Spain	NI	NI	NI	NI	0	0	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	21	576
<b>Total</b>	<b>59</b>	<b>1 724</b>	<b>46</b>	<b>2 430</b>	<b>45</b>	<b>741</b>	<b>32</b>	<b>606</b>	<b>39</b>	<b>420</b>	<b>28</b>	<b>153</b>	<b>15</b>	<b>365</b>	<b>23</b>	<b>313</b>	<b>20</b>	<b>216</b>	<b>22</b>	<b>217</b>	<b>27</b>	<b>737</b>	<b>25</b>	<b>1 044</b>

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 discharges of organic-phase drilling fluids (OPF) and cuttings**

**Table 4a: Quantities of oil and other organic-phase fluids discharged via cuttings (in tonnes), 1984-2005 \***

Country	1984	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
	Oil & Diesel <sup>1</sup>	Oil	Oil	Oil	Oil	Oil	Oil	Oil	Total OPF <sup>2</sup>	Total OPF <sup>2</sup>	Total OPF <sup>2</sup>	Total OPF <sup>2</sup>	Total OPF <sup>2</sup>	Total OPF <sup>2</sup>	Total OPF <sup>2</sup>	Total OPF <sup>2</sup>	Total OPF <sup>2</sup>
Denmark	676	507	0		0	0	0	0	31	0	0	0	0	0	0	0	0
Germany	NI	NI	0	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	0
Netherlands	1 017	284	142	41	0	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	0
Spain	0	0	0	0	0	0	NI	0	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	0
<b>Total</b>	<b>24 959</b>	<b>13 739</b>	<b>12 050</b>	<b>7 293</b>	<b>4 588</b>	<b>4 582</b>	<b>3 865</b>	<b>3 965</b>	<b>7 234</b>	<b>5 005</b>	<b>4 591</b>	<b>3 951</b>	<b>1 327</b>	<b>954</b>	<b>342</b>	<b>425</b>	<b>0</b>

<sup>1</sup> Diesel oil represents roughly 10% of total oil & diesel oil discharged in 1984. The discharge of diesel oil ceased in 1985.

<sup>2</sup> 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 <sup>(1)</sup>	1990 <sup>(1)</sup>	1991 <sup>(1)</sup>	1992 <sup>(1)</sup>	1993 <sup>(1)</sup>	1999 <sup>(2)</sup>		2000 <sup>(2)</sup>	
	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
<b>Total</b>	<b>435</b>	<b>484</b>	<b>603</b>	<b>584</b>	<b>521</b>	<b>132</b>	<b>166</b>	<b>157</b>	<b>NA</b>

(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, 2001-2005 \***

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

Country	2001(2)		2002(2)		2003(2)		2004(2)		2005(2)	
	OBF	non-OBF OPF	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	0	0
Germany	0	0	0	0	0	NI	0	0	0	0
Ireland	NI	NA	0	1	NI	NI	0	0	0	0
Netherlands	0	0	0	0	0	0	17	0	0	0
Norway	0	24	0	13	0	7	0	4	0	0
Spain	0	0	NA	N/A	NA	NA	0	0	0	0
United Kingdom	3	3	0	0	0	0	0	0	0	0
<b>Total</b>	<b>3</b>	<b>27</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>7</b>	<b>17</b>	<b>4</b>	<b>0</b>	<b>0</b>

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

\* The data in tables 4b and 4c are taken from table 4 of Part A.

## Part B: Cumulative Report

**Table 5: Spillage and flaring of oil \***

**Table 5a: Number of oil spills, 1994-2005 - 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		2005	
	≤ 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	≤ 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	44	1
Germany	NI	NI	NI	NI	0	0	0	0	0	0	0	0	0	1	0	0	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	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	25	0
Norway	349	7	281	14	246	9	245	10	249	15	226	12	198	5	221	7	238	9	121	11	108	10	141	6
Spain	NI	NI	NI	NI	0	0	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	428	10
<b>Total</b>	<b>672</b>	<b>40</b>	<b>536</b>	<b>85</b>	<b>690</b>	<b>31</b>	<b>683</b>	<b>37</b>	<b>786</b>	<b>27</b>	<b>688</b>	<b>28</b>	<b>700</b>	<b>22</b>	<b>743</b>	<b>25</b>	<b>774</b>	<b>27</b>	<b>602</b>	<b>19</b>	<b>654</b>	<b>24</b>	<b>638</b>	<b>17</b>

**Table 5b: Quantity of oil spilled, in tonnes, 1994-2005**

Country	1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005	
	≤ 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	≤ 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	3	3
Germany	NI	NI	NI	NI	0	0	0	0	0	0	0	0	0	3	0	0	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	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	0,18	0	0,119	1,625	0,2	0,0
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	13	303
Spain	NI	NI	NI	NI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
United Kingdom	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	38	39
<b>Total</b>	<b>&lt;84</b>	<b>190,2</b>	<b>&lt;114,7</b>	<b>154,5</b>	<b>126,2</b>	<b>110,2</b>	<b>82,3</b>	<b>922,1</b>	<b>&lt;74,2</b>	<b>228,1</b>	<b>77</b>	<b>206</b>	<b>60</b>	<b>453,5</b>	<b>68</b>	<b>537</b>	<b>56</b>	<b>158</b>	<b>80</b>	<b>744</b>	<b>42</b>	<b>157</b>	<b>54</b>	<b>345</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

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

## Part B: Cumulative Report

**Table 6: Emissions to air, 1992-2005 \***

CO <sub>2</sub> (10 <sup>6</sup> tonnes)												
Country	1992	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Denmark	NI	1,23	1,58	1,64	1,87	2,47	2,3	2,2	2,2	2,2	2,3	2,1
Germany	0,01	0,01	0,02	0,03	0,02	0,09	0,01	0,02	0,01	0,02	0,03	0,06
Ireland	NI	NI	0,10	0,025	0,11	0,1	0,09	0,08	0,07	NI	0,07	0,06
Netherlands	NI	1,22	1,11	1,19	1,59	1,29	1,20	1,33	1,33	1,27	1,27	1,33
Norway	7,5	8,1	8,9	8,47	9,34	9,38	10,09	11,1	10,79	11,40	11,34	12
Spain	0,86	NI	0,025	0,03	0	0	0,03	0,02	0,04	0,03	0,03	0,06
United Kingdom	79,36	20,46	15,9	19,1	20,9	19,8	18,3	19	19,9	18,79	18,52	18
<b>Total</b>	<b>88</b>	<b>31</b>	<b>28</b>	<b>30</b>	<b>34</b>	<b>33</b>	<b>32</b>	<b>34</b>	<b>34</b>	<b>34</b>	<b>34</b>	<b>34</b>

NO <sub>x</sub> (10 <sup>3</sup> tonnes)												
Country	1992	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Denmark	NI	6,24	6,77	8,4	NI	13,62	12,3	5,35	5,30	5,30	7,2	6,5
Germany	0,12	0,05	0,08	0,10	0,04	0,13	0,07	0,06	0,04	0,08	0,1	0,139
Ireland	NI	NI	0,25	0,61	0,26	0,2	0,17	0,18	0,16	NI	0,16	0,145
Netherlands	NI	5,7	5,08	5,83	5,05	4,64	5,64	4,8	5	6,6	3,74	3,81
Norway	31,3	32	34,7	43	46,1	41	44,2	51	48,7	50,3	51,6	54,4
Spain	0,8	NI	0,113	0,14	0	0	0,11	0,04	0,08	0,07	0,076	0,129
United Kingdom	195,7	56,69	38,8	57,8	66,7	55,8	45,8	53,5	69,43	61,25	60,1	59,0
<b>Total</b>	<b>228</b>	<b>101</b>	<b>86</b>	<b>116</b>	<b>118</b>	<b>115</b>	<b>108</b>	<b>115</b>	<b>129</b>	<b>124</b>	<b>123</b>	<b>124</b>

VOCs (10 <sup>3</sup> tonnes)												
Country	1992	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Denmark	NI	1	1	1	NI	2	9	10	10	8	5	4
Germany	0	0	0	0	0	0	0	0	0	0	0	0
Ireland	NI	NI	0	0	0	0	0	0	0	NI	0	0
Netherlands	NI	10	7	5	8	8	6	6	5	5	4	4
Norway	122	99	182	189	174	191	213	229	198	165	132	94
Spain	0	NI	0	0	0	0	0	0	0	0	0	0
United Kingdom	208	76	59	107	80	75	73	87	93	79	66	49
<b>Total</b>	<b>331</b>	<b>185</b>	<b>249</b>	<b>302</b>	<b>262</b>	<b>276</b>	<b>301</b>	<b>332</b>	<b>307</b>	<b>257</b>	<b>207</b>	<b>151</b>

CH <sub>4</sub> (10 <sup>3</sup> tonnes)												
Country	1992	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Denmark	NI	2	2	3	5	2	3	10	7	7	8	6
Germany	0	0	0	0	0	0	0	0	0	0	0	1
Ireland	NI	NI	1	1	3	16	1	25	0	NI	1	0
Netherlands	NI	55	41	25	21	20	15	16	13	19	11	12
Norway	11	13	26	29	26	29	29	34	32	31	31	29
Spain	1	NI	0	0	0	0	0	0	0	0	0	0
United Kingdom	226	70	56	79	72	65	56	57	52	51	55	41
<b>Total</b>	<b>238</b>	<b>140</b>	<b>126</b>	<b>136</b>	<b>126</b>	<b>132</b>	<b>104</b>	<b>142</b>	<b>105</b>	<b>108</b>	<b>106</b>	<b>90</b>

SO <sub>2</sub> (10 <sup>3</sup> tonnes)												
Country	1992	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Denmark	NI	NI	0,1	0,1	0,1	0,3	0,3	0,6	0,3	0,4	0,5	0,2
Germany	0,0	0,0	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	0,0	0,0
Netherlands	NI	0,4	0,5	0,4	0,2	0,2	0,1	0,2	0,2	0,2	0,1	0,1
Norway	NI	0,2	0,3	0,0	0,6	0,1	1,4	0,9	0,8	0,6	0,6	0,7
Spain	NI	NI	0,0	0,0	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	2,9	3,0
<b>Total</b>	<b>31,4</b>	<b>11,0</b>	<b>3,2</b>	<b>14,4</b>	<b>12,7</b>	<b>10,3</b>	<b>8,2</b>	<b>8,0</b>	<b>3,3</b>	<b>3,7</b>	<b>4,2</b>	<b>4,1</b>

\* 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: 2001-2005**

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

Country	Quantity of chemicals used (kg)				
	2001	2002	2003	2004	2005
Denmark	92 514 186	72 358 514	60 382 417	52 667 440	41 208 531
France	0	0	526 654	NI	NA
Germany	21 300	4 000	1 098 862	977 651	2 138 463
Ireland	NI	NI	NI	830 542	9 287
NL	23 995 497	NI	31 899 171	26 342 421	35 701 161
Norway	NI	NI	237 163 000	226 932 000	228 476 000
Spain	0	NA	1 272 695	0	0
UK	163 353 409	249 030 742	255 774 970	126 364 612	271 496 796
<b>Total</b>	<b>279 884 392</b>	<b>321 393 256</b>	<b>588 117 769</b>	<b>434 114 666</b>	<b>579 030 238</b>

Quantity of chemicals discharged (kg)				
2001	2002	2003	2004	2005
51 541 713	50 619 400	38 246 458	30 666 043	28 296 022
0	0	526 654	NI	NA
19 170	3 600	517 593	761 332	1 036 263
NI	NI	NI	460 057	2 566
12 580 602	NI	10 920 587	10 946 870	12 104 182
115 098 100	102 934 930	78 976 000	63 582 000	56 370 000
0	NA	976 450	0	0
72 045 032	109 474 671	113 811 824	64 219 437	117 027 290
<b>251 284 617</b>	<b>263 032 601</b>	<b>243 975 566</b>	<b>170 635 739</b>	<b>214 836 323</b>

\* 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)				
	2001	2002	2003	2004	2005
Denmark	0	900	606	136	0
France	0	0	0	NA	0
Germany	0	0	0	0	0
Ireland	NI	NI	NI	NI	1 000
NL	2 042	NI	302	0	0
Norway	NI	NI	844	800	2 505
Spain	0	NA	0	0	0
UK	0	222	2 090	2 285	191
<b>Total</b>	<b>2 042</b>	<b>1 122</b>	<b>3 842</b>	<b>3 221</b>	<b>3 696</b>

Quantity of chemicals discharged (kg)				
2001	2002	2003	2004	2005
0	300	60	14	0
0	0	0	NA	NA
0	0	0	0	0
NI	NI	NI	NI	0
145	NI	271	0	0
917	765	240	200	30
0	NA	0	0	0
0	46	171	191	191
<b>1 062</b>	<b>1 111</b>	<b>742</b>	<b>405</b>	<b>221</b>

\* 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: 2001-2005**

**Table 7c: Quantity of offshore chemicals used and discharged in kg/year, in inorganic substances with LC<sub>50</sub> or EC<sub>50</sub> less than 1 mg/l**

Country	Quantity of chemicals used (kg)				
	2001	2002	2003	2004	2005
Denmark	18 164 615	85 194	128 622	14 839	8 115
France	0	0	0	NA	NA
Germany	0	0	2 000	0	0
Ireland	NI	NI	NI	NI	0
NL	260	NI	0	31	0
Norway	NI	NI	0	0	1 000
Spain	0	NA	0	0	0
UK	0	0	0	0	2 505
<b>Total</b>	<b>18 164 875</b>	<b>85 194</b>	<b>130 622</b>	<b>14 870</b>	<b>11 620</b>

Quantity of chemicals discharged (kg)				
2001	2002	2003	2004	2005
156 968	43 443	58 553	1 215	54
0	0	0	NA	NA
0	0	0	0	0
NI	NI	NI	NI	0
1	NI	0	3	0
771	100	0	0	0
0	NA	0	0	0
0	0	0	0	10 306
<b>157 740</b>	<b>43 543</b>	<b>0</b>	<b>1 218</b>	<b>10 360</b>

**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)				
	2001	2002	2003	2004	2005
Denmark	1 041 714	1 324 413	1 813 142	1 782 941	894 141
France	0	0	0	NI	NA
Germany	0	0	3 239	4 333	4100
Ireland	NI	NI	NI	NI	0
NL	1 112 344	NI	4 279 111	633 725	3 433 667
Norway	NI	NI	3 450 000	3 769 100	3 066 300
Spain	0	NA	0	0	0
UK	12 826 964	4 934 729	8 240 728	4 227 698	7 244 942
<b>Total</b>	<b>14 981 022</b>	<b>6 259 142</b>	<b>17 786 220</b>	<b>10 417 797</b>	<b>14 643 150</b>

Quantity of chemicals discharged (kg)				
2001	2002	2003	2004	2005
200 844	166 387	163 236	123 729	106 127
0	0	0	NI	NA
0	0	3 104	634	4 100
NI	NI	NI	NI	0
9 592	NI	64 041	77 473	42 716
733 970	796 810	331 000	211 490	62 270
0	NA	0	0	0
2 247 435	1 328 207	1 547 258	1 734 676	1 889 783
<b>3 191 841</b>	<b>2 291 404</b>	<b>2 108 639</b>	<b>2 148 002</b>	<b>2 104 996</b>

## Part B: Cumulative Report

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

**Year: 2001-2005**

**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)				
	2001	2002	2003	2004	2005
Denmark	1 695 332	1 353 975	1 341 775	1 494 033	1 322 226
France	0	0	0	NA	NA
Germany	18500	20 337	1 132 505	652 623	2 631 107
Ireland	NI	NI	NI	26	0
NL	919 017	NI	3 918 807	2 097 535	8 972 101
Norway	NI	NI	4 023 000	4 069 000	3 428 700
Spain	0	NA	0	0	0
UK	6 339 638	9 323 127	9 836 007	8 014 175	4 630 943
<b>Total</b>	<b>8 972 487</b>	<b>10 697 439</b>	<b>20 252 094</b>	<b>16 327 392</b>	<b>20 985 077</b>

Quantity of chemicals discharged (kg)				
2001	2002	2003	2004	2005
347 438	332 519	206 293	301 211	319 223
0	0	0	NA	NA
175	183	1 372	9 429	9 316
NI	NI	NI	1	0
5 703	NI	11 368	39 107	16 560
327 472	210 150	293 000	81 900	33 985
0	NA	0	0	0
895 102	1 051 622	1 318 525	4 062 814	1 399 510
<b>1 575 890</b>	<b>1 594 474</b>	<b>1 830 558</b>	<b>4 494 462</b>	<b>1 778 594</b>

\* 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<sub>50</sub> or EC<sub>50</sub> > 1 mg/l\***

Country	Quantity of chemicals used (kg)				
	2001	2002	2003	2004	2005
Denmark				14 196 383	12 738 121
France				NA	NA
Germany				0	0
Ireland				NI	0
NL				2 032 827	1 916 271
Norway				NI	2 671 000
Spain				0	0
UK				33 542	73 409
<b>Total</b>				<b>16 262 752</b>	<b>17 398 801</b>

Quantity of chemicals discharged (kg)				
2001	2002	2003	2004	2005
			980 564	138 620
			NA	NA
			0	0
			NI	0
			240 660	172 416
			NI	137 000
			0	0
			25 964	64 902
			<b>1 247 188</b>	<b>512 938</b>

\* No data have been submitted prior to 2004

## Part B: Cumulative Report

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

**Year: 2001-2005**

**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	2005
Denmark	16 890 132	29 776 007	28 646 471	17 001 572	14 093 489
France	0	0	3 025	NA	NA
Germany	55 700	84 900	361 531	424 432	387 282
Ireland	NI	NI	NI	NI	0
NL	7 339 587	NI	3 809 425	2 811 406	2 809 975
Norway	NI	NI	79 178 000	83 915 000	82 626 000
Spain	0	NA	16 950	0	0
UK	163 288 565	49 435 450	27 483 033	63 147 289	44 840 086
<b>Total</b>	<b>187 573 984</b>	<b>79 296 357</b>	<b>139 498 435</b>	<b>167 299 699</b>	<b>144 756 832</b>

Quantity of chemicals discharged (kg)				
2001	2002	2003	2004	2005
5 009 968	4 580 064	4 194 417	3 191 761	3 223 911
0	0	3 025	NA	NA
0	0	19 944	69 099	41 275
NI	NI	NI	NI	0
311 191	NI	157 936	157 648	193 412
11 815 950	10 897 930	10 977 000	10 599 000	10 103 000
0	NA	3 450	0	0
48 535 999	16 904 059	11 101 380	29 930 079	14 056 179
<b>65 673 108</b>	<b>32 382 053</b>	<b>26 457 152</b>	<b>43 947 587</b>	<b>27 617 777</b>



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**Table 8: Total discharges and spillage of dispersed oil, in tonnes, 1984-2005**

Country	1984	1990	1992	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Denmark	763	543	81	178	196	172	173	185	201	679	305	322	377	487	452
Germany	0	NI	NI	NI	NI	NI	0	0	0	3	0	0	0	0	0
Ireland	0	NI	NI	NI	NI	NI	0	1	0,042	0,245	0	0	NI	0	0
Netherlands	1 153	546	285	275	232	288	284	205	169	190	256	149	114	121	108
Norway	3 900	1 096	1 491	1 064	1 519	1 813	2 440	2 648	2 887	3 081	3 210	2 921	3 505	2 946	3 306
Spain	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
United Kingdom <sup>1</sup>	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	5 047
<b>Total</b>	<b>27 176</b>	<b>17 684</b>	<b>14 192</b>	<b>10 888</b>	<b>11 783</b>	<b>12 150</b>	<b>16 752</b>	<b>13 872</b>	<b>13 643</b>	<b>9 426</b>	<b>9 782</b>	<b>9 209</b>	<b>9 341</b>	<b>8 909</b>	<b>8 913</b>

Notes :Spillages are not taken into account for 1990.

From 1997-1999, UK data include OPF.

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

## ANNEX

### Information on installations which did not meet the 40 mg/l performance standard in 2005

#### UK Sector

Operator		mg/l 2005	Actions being taken / Explanation
Britannia Operator - Britannia	Oil	43	Yearly average of approx. 20mg/l during 2006.
Paladin - Montrose Alpha	Oil	46	See box below.
Talisman - Montrose Alpha	Oil	44	Since acquiring the Montrose platform from Paladin in early 2006, Talisman have installed a new dissolved gas flotation unit and are planning on installing a further 2 hydrocyclones to improve the produced water quality.
Total - Alwyn North B	Oil	48	In order to improve produced water oil in water performance a number of items have been implemented. As a result there have been significant improvements in the Alwyn produced water performance during 2006, with the oil in water quality average for the year to date being close to 20 mg/l and total mass of oil discharged being around 26.74 tonnes.
Talisman - Beatrice alpha	Oil	46	Yearly average of approx. 30mg/l during 2006.
Talisman - Buchan Alpha	Oil	42	Yearly average of approx. 39mg/l during 2006.
Talisman - Bleo Holm	Oil	52	The Bleo Holm has been struggling with a scaling problem. In Q3 2006 they trialled a new chemical treatment and this has significantly improved the produced water quality.
BP- North Everest	Gas	71	Yearly average of approx. 37mg/l during 2006.

BP- Ravenspurn North	Gas	448	Upgrading process equipment but continuing problems caused by sludge build-up.
BP - West Sole Alpha	Gas	52	Yearly average of approx. 32mg/l during 2006.
BP- West Sole Charlie	Gas	44	Now has Produced Water Re-injection (PWRI) system.
Centrica Storage- Rough 47/8A	Gas	54	The Oily Water system has been thoroughly cleaned out on the 47/8A. A new Vac breaker is being fitted which should improve the operation. Areas of additional improvement have been highlighted if the new Vac breaker does not deliver the expected improvement.
Superior Oil - Guinevere	Gas	42	Yearly average of approx. 35mg/l during 2006.
Superior Oil - Thames Production Platform	Gas	338	Produced Water Re-injection (PWRI) system installed Q4 2005.
Perenco - Inde 49/23-A	Gas	81	Glycol contamination of micro-bead separation unit has caused on-going oil in water performance problems. Perenco looking to optimise current system and are carrying out trials with a new filtration device.
Perenco - Trent 043/24	Gas	492	Yearly average of approx. 25mg/l during 2006.
Perenco - Tyne 044/18	Gas	573	Yearly average of approx. 25mg/l during 2006.
Perenco - Waveney	Gas	373	Yearly average of approx. 7 mg/l during 2006.
Shell - Leman Alpha	Gas	96	New hydrocyclone fitted in 2006.
Shell - Sean Papa	Gas	57	New filter/coalescer unit and absorber unit fitted at cost of £2.5m.
Shell- Solepit Clipper PT	Gas	548	New disc centrifuge fitted during 2006.

Norwegian Sector

Operator		mg/l 2005	Actions being taken / Explanation
Brage	Oil	60	Installation of EPCON unit in October 2006. Injection of produced water in 2008
Grane	Oil	91	Injection of produced water started in 2005, 96% injection target for 2006. But some injectivity problems encountered however operator has a commitment to achieve 30 mg/l performance target by 2007
Oseberg A	Oil	67	Injection started in 2006 but some problems encountered with injectivity and problems for achieving the 40 (30) performance target. Applied for exemption but instead received a requirement for a maximum volume of oil to be discharged.
Heidrun	Oil	71	93% of the produced water injected but still some problems with their water treatment. By November / December 2005 full scale EPCON unit in operation.