OSPAR COMMISSION

Discharges, spills and emissions from offshore oil and gas installations in 2008

Offshore Industry Series

2010

OSPAR Convention

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.

Convention OSPAR

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.

Acknowledgement

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Contents

Executive Summary

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.

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 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 (OSPAR Agreement number: 2005-14).

This report presents the discharges, spills and emissions from offshore installations in 2008.

Part A of the report compiles data on the number of installations with emissions and discharges, discharges of produced water and displacement water contaminated with oil, and the use and discharge of drilling fluids, cuttings and chemicals. It also reports on accidental spills of oil and chemicals and emissions to air.

Part B of the report presents the discharges 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.

The annual report 2008 does not assess the findings. The offshore report to be published in 2011 will include data for 2009 as well as an assessment of both the 2008 and 2009 data and the trends.

Récapitulatif

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.

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.

Les données ont été communiquées sur le formulaire de collecte des données, ceci aux fins du rapport annuel OSPAR sur les rejets, déversements et émissions des installations pétrolières et gazières (Accord OSPAR N 2005-14).

Ce rapport présente les rejets, déversements et émissions provenant des installations offshore en 2008/

Dans la partie A du rapport, sont collationnées les données de 2006 sur le nombre d'installations procédant à des émissions et à des rejets, à des rejets d'eau de production et d'eau de déplacement 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.

Dans la partie B du rapport 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.

Le rapport annuel 2008 ne porte aucun jugement sur les constatations. Le rapport sur l'industrie de l'offshore, devant être publié en 2011, comprendra les données relatives à 2009, ainsi qu'une évaluation des données et des tendances de 2008 et 2009.

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 measures[1] relevant for the current 2008 annual report are applicable under the OSPAR Convention:

Discharges contaminated with oil

- PARCOM Recommendation 86/1 of a 40 mg/l Emission Standard for Platforms;[2]
- OSPAR Reference Method of Analysis for the Determination of the Dispersed Oil Content in Produced Water (OSPAR Agreement number: 2005-15);

[1] All measures referred to in this chapter can be downloaded from the OSPAR website www.ospar.org (under "Work Areas, Offshore Oil and Gas Industry"). At the third Ministerial Meeting of OSPAR (OSPAR 2010) in Bergen, Norway 20-24 September 2010, OSPAR Ministers adopted the North-East Atlantic Environment Strategy 2010-2020, which includes a new Offshore Oil and Gas Industry Strategy, and two revised Recommendations on a Harmonised Offshore Chemical Notification Format (HOCNF) and on a Pre-Screening Scheme for Offshore Chemicals. The current annual report deals with pre-OSPAR 2010 measures and consequently any reference to the Offshore Oil and Gas Industry Strategy or to the Recommendations on the use and discharge of chemicals should be interpreted as referring to the 2003 OSPAR Offshore Strategy and Recommendations 2000/5 and 2000/4 respectively.

[2] 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.

- OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations (as amended);

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 (OSPAR Agreement 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 (as amended);
- OSPAR Recommendation 2000/4 on a Harmonised Pre-Screening Scheme for Offshore Chemicals (as amended);
- OSPAR Recommendation 2000/5 on a Harmonised Offshore Chemical Notification Format (HOCNF) (as amended);

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 biennial assessments

The data have been 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 contained 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.

With a view to harmonising the way in which data and information on offshore oil and gas activities 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. Over time, the reporting requirements and format for data collection have regularly been reviewed and updated in the light of ongoing work under the OSPAR Commission as regards offshore installations. The 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 (OSPAR Agreement 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 2008 in Part A and cumulative data in Part B.

The offshore report to be published in 2011 will include data for 2009 as well as an assessment of both the 2008 and 2009 data and the trends.

2. Results

Part A: Report relating to 2008 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 2008 data

Part A: Report relating to 2008 data

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

Year: 2008

Country	Production [B]		Subsea [E]	Drilling [F]	Other [G]	Total
	Oil [C]	Gas [D]				
Denmark	12	0	1	5,15	0	**18**
Germany	1	2	0	0,25	0	**3**
Ireland	0	2	3	0,92	1	**7**
Netherlands	9	105	9	9	0	**132**
Norway	52	10	41	17	8	**128**
Spain	0	0	0	0	1	**1**
United Kingdom	81	157	166	52	1	**457**
Total	**155**	**276**	**220**	**84**	**11**	**746**

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 and loading buoys

Part A: Report relating to 2008 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: 2008

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	28 322 972	10	13	24	292	379	671	6	11 169 825
Germany	1	8 291	64	13	77	1	0	1	0	0
Ireland	1	1 997	6	21	27	0	0	0	0	0
Netherlands	70	10 900 340	6	12	18	67	131	197	5	2 887 064
Norway	45	149 241 700	12	11	23	1 852	1 569	3 421	18	30 379 135
Spain (1)	0	0	0	0	0	0	0	0	1	1 794
United Kingdom	102	196 683 623	19	16	35	3 783	3 159	6 942	24	39 645 998
Total	**229**	**385 158 923**	**16**	**14**	**29**	**5 995**	**5 237**	**11 232**	**54**	**84 083 816**

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) Spain - during the first three months of the year seawater was injected in the disposal well to maintain negative pressure. This water was counted as well.

Part A: Report relating to 2008 data

Table 2b: Displacement water [A]

Year: 2008

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 1]	dissolved [D]	dispersed [D]	total [E 2]		
Denmark	2	2 133 514	0,005	0,71	0,72	0,01	1,52	1,53	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	1 707 623	2,6	5,6	8,20	4,375	9,615	14	0	0
Norway	6	35 781 227	0	1,6	1,60	0	58	58	0	0
Spain	0	0	0	0	0	0	0	0	0	0
United Kingdom	2	1 004 468	0	1,47	1,47	0	1,5	1,47	0	0
Total	**11**	**40 626 832**	**0,1**	**1,7**	**1,8**	**4**	**71**	**75**	**0**	**0**

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 2008 data

Table 3: Installations exceeding the 30 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 30 mg/l performance standard as defined in OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations (as amended)

Year: 2008

Installation [A]	Type of installation [B]	Quantity of water discharged during the year (10^3 m^3)	Annual average oil content [C] (mg/l)			Total amount of oil discharged (tonnes per year)			Total amount of dispersed oil during the period exceeding the performance standard (tonnes per year)
			dissolved	dispersed	total	dissolved	dispersed	total	
NL-Total/K6N 2008	Gas	1,0	45	38	83	0,0	0,0	0,1	0,0
NL-Venture / J6A	Gas	20,6	135	33	168	2,8	0,7	3,5	0,1
NL-GdF/G14-A 2008	Gas	0,5	170	58	227	0,1	0,0	0,1	0,0
NL-GdF/G17d-A/AP2008	Gas	17,1	85	41	125	1,4	0,7	2,1	0,2
NL-GdF/K9ab-B 2008	Gas	2,1	43	53	96	0,1	0,1	0,2	0,0
NL-GdF/K12-BD2008	Gas	19,8	334	36	370	6,6	0,7	7,3	0,1
NL-GdF/L10-A (s.t. A) 2008	Gas	6,5	35	53	88	0,2	0,3	0,6	0,1
NO-Grane	Oil	254,0	4	33	38	1,0	8,5	9,5	0,9
NO-Heidrun	Oil	157,4	4	66	69	0,6	10,4	10,9	5,6
NO-Kristin	Gas	665,1	15	38	53	9,8	25,6	35,4	5,6
NO-Oseberg Sør	Oil	26,8	17	36	53	0,5	1,0	1,4	0,2
UK-Shearwater C PUQ Platform	Gas	75,1	136	1993	2129	10,2	149,7	159,9	147,5
UK-Sean PP Platform	Gas	19,2	249	918	1167	4,8	17,6	22,4	17,1
UK-Hewett 48/29a Platform	Gas	0,1	58	765	823	0,0	0,1	0,1	0,1
UK-Clipper PT Platform	Gas	68,3	12	388	400	0,8	26,5	27,3	24,5
UK-Curlew FPSO	Oil	11,5	60	237	297	0,7	2,7	3,4	2,4
UK-West Sole WA Main Platform	Gas	3,8	242	94	336	0,9	0,4	1,3	0,2
UK-Bruce PUQ Platform	Oil	11,0	43	76	119	0,5	0,8	1,3	0,5
UK-Ravenspurn North CPP	Gas	72,4	185	66	251	13,4	4,8	18,2	2,6
UK-Camelot CA	Gas	31,0	n/i	65	65	n/i	2,0	2,0	1,1
UK-Hyde Platform	Gas	14,0	9	63	72	0,1	0,9	1,0	0,5
UK-Trent Platform	Gas	9,6	17	55	72	0,2	0,5	0,7	0,2
UK-Rough BD	Gas	18,9	109	52	161	2,1	1,0	3,1	0,4
UK-Judy Platform	Oil	303,2	30	51	81	9,1	15,4	24,5	6,4
UK-Cleeton CPQ Platform	Gas	27,1	69	47	116	1,9	1,3	3,1	0,5
UK-Waveney Platform	Gas	0,6	12	45	57	0,0	0,0	0,0	0,0
UK-Inde AC Platform	Gas	18,6	87	37	124	1,7	0,7	2,4	0,1
UK-Guinevere Platform	Gas	0,5	61	34	95	0,0	0,0	0,0	0,0
UK-Kittiwake Platform	Oil	328,9	10	31	41	3,3	10,3	13,6	0,3
UK-Montrose Alpha Platform	Oil	448,2	11	31	42	5,1	13,9	19,0	0,4
UK-Clair Phase 1 Platform	Oil	1,6	69	31	99	0,1	0,1	0,2	0,0
Total		**2 634,5**	**30**	**113**	**115**	**78,1**	**296,8**	**303,7**	**217,6**

Table 3a. Information on installations which did not meet the 30 mg/l performance standard

This table concerns installations for which the average annual oil content of the produced water discharged to the sea exceeds the 30 mg/l

Year: 2008

Country/Installation/Operator [A]	Type of installation [B]	Annual average oil content mg/l [C]	Reasons for not achieving the standard	Action being taken
NL-Total/K6N 2008	Gas	38	Two new subsea wells K5F started to produce towards K6N, containing a high wax content. This created some problems for the Cross flow membrane unit and the twin filters installed.	Research started to abate the waxproblem however were not yet solved. Solutions are foreseen and will be reported in 2009
NL-Venture / J6A	Gas	33	Due to maturing field more pw is produced. Therefore during the 2nd quarter of 2008 the performance standard has been exceeded	The Skimmertank has been inspected and revamped. Two extra separation tanks have been installed to increase the residence time for a better separation. In June 2008 pw quality was in line with the performance standard
NL-GdF/G14-A 2008	Gas	58	In the first six months of 2008 closed drain vessel was not working adequately	Operational actions have been taken and system is working adequately since July 2008
NL-GdF/G17d-A/AP2008	Gas	41	Due to tie-inns from new gasfields, the separation efficiency was not adequately for the first six months of 2008	In February 2008 a new filter coalescer has been installed however did not result in the achievement of the performance standard. Therefore a steamstripping unit was installed in March 2008 which lead up to now to achievement of the performance standard

Country/Installation/Operator [A]	Type of installation [B]	Annual average oil content mg/l [C]	Reasons for not achieving the standard	Action being taken
NL-GdF/K9ab-B 2008	Gas	53	Due to new side track the separation effeciency was not adequately. The separation equipment, among others an X-flow Membrane system, fouled due to all kind of debris. Finally the side track well was shut down and a Twinfilter as a supporting pw treatment was installed next to the X-flow membrane system	On the 26th of June 2008 a Twin filter has been installed to support the X-flow membrane system to treat the pw discharges
NL-GdF/K12-BD2008	Gas	36	A new gasplatform K12-K is producing wet gas towards K12-BD. During the start-up of the new platform the Methanol reclaiming unit could not handle all the Methanol so the treatability of the pw went down	Methanol reclaiming unit is working adequately now. Treatability of pw has increased
NL-GdF/L10-A (s.t. A) 2008	Gas	53	Both skimmertanks on this platform have been contaminated with very dirty fluids from the wells. After cleaning these skimmertanks pw quality is back to a level below the performance standard	Skimmertanks have been cleaned and the treatability of pw restored
NO-Grane	Oil	33	PWRI was down in two periods	Work in progress to reduce OiW
NO-Heidrun	Oil	66	Increased discharge of oil from jetting	Several solutions being evaluated
NO-Kristin [(1)]	Gas	38	Process utility system not functioning	Ongoing modifications of process utility systems
NO-Oseberg Sør	Oil	36	PWRI was down for a short time	Keep PWRI in operation
UK-Shearwater C PUQPlatform/ Shell	Gas	1993	Very stable emulsion formed between condensate, produced water and chemicals. Major problem is particle size – 5 micron, hydrocyclones efficient at 10-12 micron. The loss of a high temperature well significantly reduced the temperature fluids are produced at exacerabating the problem further.	MacroPolymer Porous extraction being investigated. A dedicated Shell Global Solutions team involved in this project and the following options are being considered:: further chemicals solutions; PWRI; and shipping the PW to shore. Still out of compliance for 2009 to date but improved performance.

Country/Installation/Operator [A]	Type of installation [B]	Annual average oil content mg/l [C]	Reasons for not achieving the standard	Action being taken
UK-Sean PP Platform/ Shell	Gas	918	Corrosion Inhibitor: forms stable emulsion. Corrossion Inhibitor was not previously a major issue as the platform was not producing continously. however, the introduction of new compressors allows the platform to produce continually and corrossion inhibitor is therefore required continually.	New pipework which was installed to improve the absorber package was unsuccessful. Chemical trials are being undertaken and the complete water handling system is being reviewed by a dedicated Shell Global solutions team. Still out of compliance for 2009 to date but improved performance.
UK-Hewett 48/29a Platform/ Tullow	Gas	765	Well flow was unstable through some months resulting in spikes in fluid flow which adversely affected separation and residence times. Sump tank liquid level controls had been found to be not fit for purpose. Control valve on PW dump line not functioning correctly	New level controls installed in Sep 09 shutdown (delayed from Dec 08) in order to provide better control and residence times. PW meters to be installed on degasser outlets to provide better volume measurement. Control valve on dump line to be repalced during next manned period. Until this is done, PW is being returned to Bacton rather than discharged. Still out of compliance for 2009 to date but improved performance.
UK-Clipper PT Platform/ Shell	Gas	388	Stable emulsion; also centrifuge system installed does not function efficiently due to a sand/silt problem.	PWRI installed during April 2009.
UK-Curlew FPSO/ Shell	Oil	237	Since 2007 Curlew has experienced a low water-cut. Produced Water is discharged on an irregular batch basis from the slops tank.	Bringing a high water cut well on-line is being investigated - this would improve mechanical treatment. Disposal via tanker being considered and trial of Cetco crude Sorb (absorber package) scheduled for November 2009. Still out of compliance in 2009 to date with decreased performance
UK-West SoleWA Main Platform/ BP	Gas	94	Produced water on the West Sola Alpha has insufficinet residence time in vessel to allow separation. Annual PW discharge quantities are small. In 2008 was 0.36 tonnes of oil in 3804 tonens of produced water.	It is planned that two tiebacks will be multiphased ashore giving a longer residence time in the separator for the remaining wells. BP are hoping that the water quality will improve as a result of this. Still out of compliance for 2009 to date with decreased performance.

Country/Installation/Operator [A]	Type of installation [B]	Annual average oil content mg/l [C]	Reasons for not achieving the standard	Action being taken
UK-Bruce PUQ Platform/ BP	Oil	76	The Bruce treatment plant is not able to treat the produced water to less than 30mg/l. Bruce can re-inject all its produced water. The PWRI pump is over capacity so the produced water is mixed with seawater to make up volume. Uptime was poor for PWRI in 2007 but improved in 2008 - 91% PWRI in 2008.	When PWRI is down a small amount can be exported to Kinneal (2%BS&W), reminder is discharged overboard. Demulsifier trials ongoing. Contingency plan for when PWRI down is to maximise production while minimising water production wells. Still out of complinace for 2009 to date but improved performance
UK-Ravenspurn North CPP/ BP	Gas	66	The oil in produced water on the Ravenspurn North forms a tight emulsion caused by the corrosion inhibitor. To improve PW quality, BP added secondary produced water treatment package in 2006/7. BP have also trialled demulsifiers, deoilers etc and the quantity of oil in produced water has improved significantly over the years.	PWRI not feasable due to space issues. Volumes of water (and oil) decreasing. The slugcatcher vessel is to be used as an initial sandtrap. Still out of complinace for 2009 to date at broadly similar performance level.
UK-Camelot CA Platform/ ERT	Gas	65	The main issue with OiW analysis on Camelot A is sample frequency and obtaining a representative sample. As Camelot A is a NUI, it is not logistically possible to frequently sample PW discharges. As platform intervention visits are often instigated by process problems, samples are often taken when OiW levels are elevated and not representative of “normal” PW discharges. They also experience issues with taking a sample, which later turns out to be high (analysis is not carried out on the installation) but as a return visit to the installation cannot be undertaken, this high sample has to be used for subsequent reporting until such times as another sample can be taken.	The PW process will be allowed to stabilise after upsets prior to collecting samples. Currently operating in compliance for 2009 to date.
UK-Hyde Platform/ BP	Gas	63	Relies on residence time to achieve compliance. Water cut is increasing however, quantities are small with 0.6 tonnes oil total discharged in 2008.	Separator will be cleaned out in 2009 shutdown. Still out of complinace for 2009 to date at broadly similar performance level.
UK-Trent Platform/ Perenco	Gas	55	MEG laden fluids from subsea tie-backs were too saline for onward transmission to shore necessitating discharge at Trent. The volumes being higher than Trent design capacity	Improvements to increase capacuity and separation effeciency planned for 2009 shutdown.

Country/Installation/Operator [A]	Type of installation [B]	Annual average oil content mg/l [C]	Reasons for not achieving the standard	Action being taken
Rough BD/ Centrica Storage	Gas	52	Rough BD only discharges produced water for a short period during the year. Irregular discharges and low water quantities thought to to be the cause of the outage.	Vessels cleaned and maintenance carried out (filters changed etc) which has improved performance in 2009. A review of operation and options to determine if suitable technologies are available to improve performance will be carried out by Q2 2010. Still out of compliance for 2009 to date but performance improved.
Judy Platform/ Conoco Phillips	Other	51	Feb 2008 - rise in Oil in PW concentration believed to be because of high sand content. Sand removed during shut-down but results still poor. Problems experienced returning on line, single train operations, hydrocyclones not operating effectively. Chemist stationed on board (Aug/Sept) to develop detailed profile of water treatment system.	Chemical trails carried out which were succesful. Platform in compliance for 2009 to date.
UK-Cleeton CPQ Platform/ BP	Gas	47	The Cleeton has 2 streams, one of which was re-injected giving 64% PWRI in 2008. The water cut of the second stream was too high to reinject however, the loss of the highest water cut well has enabled PWRI to be commissioned.	Cleeton is 100% PWRI since Q1 2009
UK-Waveney Platform/ Perenco	Gas	45	Process upsets in early 2008 caused higher concentrations of oil to sea to be discharged.	Produced water discharge from Waveney now stopped - zero discharge for 2009 to date.
UK-Inde AC Platform/ Perenco	Gas	37	Use of MEG significantly affects oil separation process.	Improvements in process control and reduction in MEG use. In compliance for 2009 to date.
UK-Guinevere Platform/ Perenco	Gas	34	A limited number of samples was taken during the year and one of these showed an unusually high figure that skewed the result of the year as a whole. Process control on Tyne is good and these results are considered unrepresentative of actual performance. Total volumes extremely small.	In compliance for 2009 to date.

Country/Installation/Operator [A]	Type of installation [B]	Annual average oil content mg/l [C]	Reasons for not achieving the standard	Action being taken
UK-Kittiwake Platform/ Venture	Oil	31	In March 2008 a high monthly oil in water average was measured with these problems continuing until August. It was ascertained that problems during a scale dissolver operation on well KA15 had introduced a large amount of solids and chemicals to the system resulting in poor separation extremely high oil in water results.	A root cause analysis was completed which identified a number of improvement options which included trials of new deoiler chemicals, removal of the SAL resulting in direct oil export and improved process stability, better solids management through improved scale control and the work-over of well KA15 to improve system throughput and increase process temperature improving separation. Monthly average oil in water discharges returned to below 30mg/l for the remainder of Dec 08. In compliance for 2009 to date.
UK-Montrose Alpha Platform/ Talisman	Oil	31	The two large hydrocyclones and CETCO unit installed in 2007 had commissioning problems. The hydrocyclones required additional servicing and repair. The CETCO unit had significant downtimes and was found to be half full of sand during the 2007 shutdown reducing efficiency. Separators have not run effectively during flow upsets. During 2008 continued to have significant process upsets due to gas compression / WAGE trips.	Plan is now to install the reject vessel of an EPCON unit in addition to what is already there, as part of the work scope to hard pipe the current produced water system on Montrose. The hard piping of the produced water system is due to commence during this year's shutdown where tie in points will be installed, with a view to permenantly tying in the hydrocyclones, CETCO unit and EPCON reject vessel in 2010. Improved uptime of the WAGE module is still a matter of priority and remains a key area of focus. The chemical vendor has also been commissioned to carryout a chemical review of the Montrose chemical regime to ensure the type and dose rates are still the most effective. In addition, plans are to discharge Arbroath PW at Arbroath rather than send to Montrose. This would increase capacity/retention time at Montrose possibly improving PW quality. Still out of compliance for 2009 at broadly similar performace level.

Country/Installation/Operator [A]	Type of installation [B]	Annual average oil content mg/l [C]	Reasons for not achieving the standard	Action being taken
UK-Clair Phase 1 Platform/BP	Oil	30,5	When PWRI is down, there is insufficient PW for effective operation of separation equipment. PWRI 99% in 2008	Internals of PW treatment vessel were changed in 2009 shutdown. Produced water overboard discharge is now less than 30mg/l when in operation.

A. Name of the installation where the discharge takes place.

B. Same categories as in table 1: Oil (O), Gas (G), Sub-sea (S), Other (oth) installations.

C. The annual average oil content should be 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.

(1) Installation of hydrocyclones and Epcon unit as part of the Tyrihans development in 2009. Ongoing modifications of process utility systems.

Part A: Report relating to 2008 data

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

Year: 2008

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	9 704	0	0	0	0	0	3 199
Germany	1 268	0	0	0	0	0	2 146
Ireland	1 206	0	0	0	0	0	1 136
Netherlands	15 812	0	0	0	0	0	8 139
Norway	185 891	0	0	0	60	49 108	24 854
Spain	0	0	0	0	0	0	0
United Kingdom	82 822	0	0	0	4	508	46 725
Total OBF	**296 704**	**0**	**0**	**0**	**64**	**49 616**	**86 199**

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 2008 data

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

Year: 2008

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	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	968	0	0	0	0	0	630
Spain	0	0	0	0	0	0	0
United Kingdom	263	0	0	0	0	0	6
Total non-OBF OPF	**1 231**	**0**	**0**	**0**	**0**	**0**	**636**

Grand total OPF [E]	**297 935**	**0**	**0**	**0**	**64**	**49 616**	**86 834**

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 2008 data

Table 5: Accidental spillages

Year: 2008

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	24	2	26	2	99	101
Germany	0	0	0	0	0	0
Ireland	1	0	1	0,004	0	0,004
Netherlands	20	1	21	0,7	3	3,6
Norway	164	9	173	7,5	156	164
Spain	0	0	0	0	0	0
United Kingdom	262	8	270	17,03	20,25	37,28
Total	**471**	**20**	**491**	**27**	**278**	**305**

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	1	0	1	0	0	0
Germany	0	0	0	0	0	0
Ireland	1	0	1	0,07	0	0,07
Netherlands	7	0	7	0,6	0,0	0,623
Norway	106	30	136	20	347	367
Spain	0	0	0	0	0	0
United Kingdom	103	58	161	21,83	681,4	703,23
Total	**218**	**58**	**306**	**43**	**1028**	**1071**

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

Part A: Report relating to 2008 data

Table 6: Emissions to air

Year: 2008

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	2 084,0	8,23	2,25	4,75	0,2
Germany	40,3	0,05	0,12	0,54	0,00
Ireland	89,4	0,52	0,04	0,58	0,01
Netherlands	1 404,4	3,80	4,7	16,0	0,14
Norway	13 771,0	51	50	31	0,5
Spain (1)	50,4	0,11	0,11	0,43	0,00
United Kingdom	15 562,3	52,3	40,7	41,6	3,29
Total	**33 001,9**	**116**	**98**	**95**	**4,1**

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.

(1) The increase in CO_2 and NO_x is due to the increase in quantity of gas injected and therefore in quantity of fuel-gas to equipment.

Part A: Report relating to 2008 data

Table 7: The use and discharge of offshore chemicals

Year: 2008

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)]	55 035 267	10	10 502	766 936	459 550	14 435 908	14 703 054	**85 411 227**
Germany	503 527	0	0	0	6 972	0	4 333	**514 832**
Ireland	6 274 318	0	0	8 730	35 612	745	722 136	**7 041 542**
Netherlands	27 200 803	0	0	303 012	185 157	815 948	7 572 521	**36 077 441**
Norway [(2)]	259 360 628	146	0	3 141 149	1 182 315	See footnote (2)	95 347 550	**359 031 788**
Spain	0	0	0	0	0	0	0	**0**
United Kingdom	252 351 135	3 773	1 720	3 156 299	2 712 894	4 150 103	78 776 917	**341 152 841**
Total	**600 725 678**	**3 929**	**12 222**	**7 376 126**	**4 582 500**	**19 402 704**	**197 126 511**	**829 229 671**

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) Denmark's figures include figures for the use offshore the Faroe islands (including 10 kg LCPA)
(2) For Norway the figures for the column inorganic, LC50 or EC50 >1 mg/l has been included in the column "Ranking".

Part A: Report relating to 2008 data

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

Year: 2008

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)]	31 370 942	1	2	56 457	57 512	1 484 608	3 833 698	**36 803 220**
Germany	503 282	0	0	0	0	0	52	**503 334**
Ireland	4 203 349	0	0	0	3692,79	545,05	242 717	**4 450 304**
Netherlands	12 878 423	0	0	5 775	28 462	169 074	435 389	**13 517 123**
Norway [(2)]	76 539 183	140	0	10 515	4 579	see footnote (2)	12 956 914	**89 511 331**
Spain	0	0	0	0	0	0	0	**0**
United Kingdom	110 746 879	42	1 596	661 647	918 515	594 504	13 596 227	**126 519 411**
Total	**236 242 058**	**183**	**1 598**	**734 394**	**1 012 761**	**2 248 731**	**31 064 997**	**271 304 723**

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) Denmark's figures include figures for the discharge offshore the Faroe Islands (including 1 kg LCPA)
(2) For Norway the figures for the column inorganic, LC50 or EC50 >1 mg/l has been included in the column "Ranking".

Part A: Report relating to 2008 data

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

Year: 2008

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	0	0	0	0	0	0	0	0
Germany	0	0	0	0	0	0	0	**0**
Ireland	69	0	0	0	0	0	0	**69**
Netherlands	155	0	0	7	0	0	169	**331**
Norway (1)	321 326	0,01	0	11 078	10	See footnote 1	39 528	**371 942**
Spain	0	0	0	0	0	0	0	**0**
United Kingdom (2)	574 029	0	0	1 715	1 970	1 661	123 366	**703 230**
Total	**895 579**	**0**	**0**	**12 800**	**1 980**	**1 661**	**163 063**	**1 075 572**

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 (B-G) and is therefore ranked according to OSPAR Recommendation 2000/4.

(1) For Norway the figures for the column inorganic, LC50 or EC50 >1 mg/l has been included in the column "Ranking".
(2) UK - the figure of 489 kg was added to the total as "unresolved" category.

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 1984-2008*

Country	1984	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Denmark	7	20	20	20	10,5	8	8,23	9	12	15	16	16
France [1]	0	0	0	0	0	0	0,1	0	0	0	0	0
Germany	1	3	3	4	2	1	1	2	2	2	3	3
Ireland	1	2	2	2	0	0	0	4	5	2,2	2,5	2,5
Netherlands	30	63	60	88	97	103,5	114,93	113,8	106,3	104,1	105	108
Norway [2]	13	24	25	34	93	90	83	61	53	54	59	60
Spain	1	1	1	1	1	1,5	9	5	2	0	0	1
UK [3]	90	79	79	79	81	152	169	193	164	218	186	298
Total	**143**	**192**	**190**	**228**	**284,5**	**356**	**385,26**	**387,8**	**344,3**	**395,3**	**371,5**	**488,5**

Country	2000	2001	2002	2003	2004	2005	2006	2007	2008
Denmark	16	18	17	19	20	17	19	19	18
France [1]	0	0	0	0,1	0	0	0	0	0
Germany	3	3	2	2	3	4	3	3	3
Ireland	2,5	4	4	NI	6	6	7	7	7
Netherlands	108	114	114	123	124	129	128	130	132
Norway [2]	60	65	67	63	103	108	109	125	128
Spain	1	1	1	1	1	1	1	1	1
UK [3]	298	332	381	383	396	407	416	444	457
Total	**488,5**	**537**	**586**	**592**	**653**	**671**	**683**	**730**	**746**

[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.

Table 1 (cont'd): Number of installations in the OSPAR maritime area

Table 1b [4]: Total number of installations in the OSPAR maritime area, 1984-2008**

	1984	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2002
Total	NI	NI	NI	NI	320	438	459	554	520	560	587	591	1070

	2003	2004	2005	2006	2007	2008
Total	1131 [3]	1130	1130	1281	1281	1282

[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 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, 1993-2008*

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Oil	88	104	99	133	120	135	137	174	152	153	146	148	148	151	154	155
Gas	148	183	204	207	171	164	186	239	223	225	254	257	257	259	274	276
Subsea	6	6	75	5	6	87	44	6,5	81	120	143	179	184	190	206	220
Drilling	43	63	7	43	47	9	4	69	76	86	45	58	71	75	85	84
Other	0	0	0	0	0	0	0	0	5	2	4	11	11	8	11	11
Total	**285**	**356**	**385**	**388**	**344**	**395**	**371**	**489**	**537**	**586**	**592**	**653**	**671**	**683**	**730**	**746**

* 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), 1984-2008

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	2 584	2 653	2 833
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
Total	**1 717**	**3 945**	**6 027**	**7 947**	**8 562**	**9 258**	**9 390**	**8 990**	**8 332**	**8 482**	**8 357**

Country	2006	2007	2008
	Dispersed	Dispersed	Dispersed
Denmark	385	386	380
Germany	0	0	0
Ireland	0	0	0
Netherlands	114	156	140
Norway	2 379	1 626	1 627
Spain	0	0	0
UK	4 357	2 960	3 160
Total	**7 235**	**5 128**	**5 308**

Dissolved from 2001

Country	2001	2002	2003	2004	2005	2006	2007	2008
	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved
Denmark	205	192	265	292	348	359,53	353,39	202,38
Germany	0,32	0,42	0,50	0,80	0,76	0,952	0,591	0,545
Ireland	NI	NI	NI	0,38	0,02	0,004	0,050	0,011
Netherlands	82	57	72	76	70	52,4	72	66,835
Norway	1 101	1 165	906	1 547	1 524	1 711	1 879	1 852
Spain	0	0	0	0	0	0	0	0
UK	3 710	4 260	3 599	3 276	3 049	2 756	2 273	3 783
Total	**5 098**	**5 674**	**4 843**	**5 192**	**4 992**	**4 880**	**4 578**	**5 905**

Table 2: Oily aqueous discharges to the maritime area *

Table 2b: Quantity of displacement and produced water discharged daily to the sea (in m^3/day), 1984-2008

Country	1984	1990	1994	1996	1998	2000	2001	2002	2003	2004	2005	2006	2007	2008
Denmark			14 247	13 425	18 000	43 909	46 273	44 158	54 243	67 578	74 522	76 677	75 204	83 442
Germany			0	0	0	14	14	19	18	22	22	26	23	23
Ireland			NI	7	6,69	6	7	8	NI	8	7	9	6	5
Netherlands	NI	NI	35 105	35 214	30 303	31 820	38 117	24 263	21 381	23 313	24 275	26 429	38 391	34 542
Norway			316 029	412 283	462 969	461 323	493 342	490 826	524 910	537 342	533 349	510 618	558 647	506 912
Spain			NI	0	0	0	0	0	0	0	0	2	3	0
UK			512 657	567 540	693 151	652 188	696 482	738 082	719 950	690 481	642 967	603 112	555 784	541 611
Total			**878 038**	**1 028 469**	**1 204 430**	**1 189 260**	**1 274 236**	**1 297 356**	**1 320 502**	**1 318 745**	**1 275 143**	**1 216 873**	**1 228 058**	**1 166 536**

* 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.

Table 2c: Total amount of produced water and displacement water discharged, and produced water injected

	Volume 2001	Volume 2002	Volume 2003	Volume 2004	Volume 2005	Volume 2006	Volume 2007	Volume 2008
PW*	397 342 936	406 980 758	419 235 111	422 925 843	413 865 753	398 629 647	401 516 892	385 158 923
DPW**	67 753 196	66 554 292	62 747 873	58 416 126	51 561 436	45 740 777	46 723 197	40 626 832
IPW*	30 354 834	46 619 734	58 960 839	74 978 612	76 893 589	80 185 640	87 721 185	84 083 816
Total	**465 096 132**	**520 154 784**	**540 943 823**	**556 320 581**	**542 320 778**	**524 556 064**	**535 961 274**	**509 869 571**

* Produced and injected water as mentioned in Table 2a in Part A

** Diplacement water as mentioned in Table 2b in Part A

Part B: Cumulative Report

Table 3: Installations which do not 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, 1984-2006, and quantity of oil discharged by these installations (in tonnes)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total number of installations with discharges in the Convention area	190	228	285	356	385	388	344	395	371	489	537	586	623	648	671	671
Number of installations exceeding 40 mg/l	68	65	64	59	46	45	32	39	28	15	23	20	22	28	25	14
Quantity of dispersed oil discharged	2027	4299	1017	1724	2429	840	607	420	153	365	312	216	217	737	1044	469

Table 3b [B]: Number of installations with discharges exceeding the 30 mg oil/l performance standard, valid from 2007 onwards, and quantity of oil discharged by these installations (in tonnes)

	2007	2008
Total number of installations with discharges in the Convention area	730	704
Number of installations exceeding 30 mg/l	22	31
Quantity of dispersed oil discharged	319	297

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)

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.

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.

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

Table 3c: Number of installations with discharges exceeding the 40 mg oil/l performance standard, 1994-2006, by Contracting Party, and quantity of oil discharged by these installations (in tonnes)

Country	1994		1996		1997		1998		1999		2000		2001	
	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
Denmark	1	3	2	2	1	4	2	27	2	29	2	42	1	6
Germany	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Ireland	NI	NI	0	0	0	0	0	0	1	0,3	1	0,2	0	0
Netherlands	22	17	16	5	10	5	10	5	7	4	5	2	3	1
Norway	6	187	3	32	2	46	3	26	2	22	2	81	2	95
Spain	NI	NI	0	0	0	0	0	0	0	0	0	0	0	0
UK	30	1 517	24	702	19	551	24	362	16	98	5	240	16	210
Total	**59**	**1 724**	**45**	**741**	**32**	**606**	**39**	**420**	**28**	**153**	**15**	**365**	**23**	**313**

Country	2002		2003		2004		2005		2006	
	Number of instal-lations	Amount dis-charged [C]	Number of instal-lations	Amount dis-charged [C]	Number of instal-lations	Amount dis-charged [C]	Number of instal-lations	Amount dis-charged [C]	Number of instal-lations	Amount dis-charged
Denmark	0	0	1	52	0	0	0	0	0	0
Germany	0	0	0	0	0	0	0	0	0	0
Ireland	0	0	NI	NI	1	0,12	0	0	0	0
Netherlands	5	2	4	3	0	0	0	0	0	0
Norway	1	82	0	0	3	344	4	468	3	339
Spain	0	0	0	0	0	0	0	0	0	0
UK	14	130	17	162	23	393	21	576	11	477
Total	**20**	**216**	**22**	**217**	**27**	**737**	**25**	**1 044**	**14**	**816**

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.

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.

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

Table 3d: Number of installations with discharges exceeding the 30 mg oil/l performance standard, valid from 2007 onwards, by Contracting Party and quantity of oil discharged by these installations (in tonnes)

Country	2007		2008	
	Number of instal-lations	Amount dis-charged	Number of instal-lations	Amount dis-charged
Denmark	0	0	0	0
Germany	0	0	0	0
Ireland	0	0	0	0
Netherlands	4	1,6	7	2,6
Norway	2	22	4	45,5
Spain	0	0	0	0
UK	16	295	20	249
Total	**22**	**319**	**31**	**297**

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), 1984-2008 *

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

Country	2005	2006	2007	2008
	Total OPF[2]	Total OPF[2]	Total OPF[2]	Total OPF[2]
Denmark	0	0	0	0
Germany	0	0	0	0
Ireland	0	0	0	0
Netherlands	0	0	0	0
Norway	0	0	0	0
Spain	0	0	0	0
UK	0	0	0	0
Total	0	0	0	0

[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, 2001-2008*

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

Country	2001		2002		2003		2004		2005		2006	
	OBF	non-OBF OPF	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	0	0
Germany	0	0	0	0	0	NI	0	0	0	0	0	0
Ireland	NI	NA	0	1	NI	NI	0	0	0	0	0	0
Netherlands	0	0	0	0	0	0	17	0	0	0	0	0
Norway	0	24	0	13	0	7	0	4	0	0	0	0
Spain	0	0	NA	N/A	NA	NA	0	0	0	0	0	0
United Kingdom	3	3	0	0	0	0	0	0	0	0	0	0
Total	**3**	**27**	**0**	**14**	**0**	**7**	**17**	**4**	**0**	**0**	**0**	**0**

Country	2007		2008	
	OBF	non-OBF OPF	OBF	non-OBF OPF
Denmark	0	0	0	0
Germany	0	0	0	0
Ireland	0	0	0	0
Netherlands	0	0	0	0
Norway	0	0	0	0
Spain	0	0	0	0
United Kingdom	0	0	0	0
Total	**0**	**0**	**0**	**0**

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

Table 5: Spillage and flaring of oil *

Table 5a: Number of oil spills, 1994-2008 - Spills less than 1 tonne (≤ 1 T) and spills above 1 tonne (> 1 T)

	1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		2004	
Country	≤ 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**

	2005		2006		2007		2008	
Country	≤ 1 T	> 1 T	≤ 1 T	> 1 T	≤ 1 T	> 1 T	≤ 1 T	> 1 T
Denmark	44	1	46	0	30	1	24	2
Germany	0	0	0	0	0	0	0	0
Ireland	0	0	3	0	3	0	1	0
Netherlands	25	0	25	0	35	0	20	1
Norway	141	6	115	7	155	12	164	9
Spain	0	0	0	0	0	0	0	0
United Kingdom	428	10	305	8	270	9	262	8
Total	**638**	**17**	**494**	**15**	**493**	**22**	**471**	**20**

Table 5: Spillage and flaring of oil *

Table 5b: Quantity of oil spilled, in tonnes, 1994-2008

Country	1994		1995		1996		1997		1998		1999		2000	
	≤ 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
Germany	NI	NI	NI	NI	0	0	0	0	0	0	0	0	0	3
Ireland	NI	NI	NI	NI	0	0	0	0	<1	0	NI	NI	NI	NI
Netherlands	<8,2	2	1,5	0	1	38	0,9	18	1,26	0	1	5,6	0,5	0
Norway	32	23	28	89	37	26	35,6	72,4	25	131	23	114	16	12
Spain	NI	NI	NI	NI	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
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**

Country	2001		2002		2003		2004		2005		2006		2007	
	≤ 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	15	0	7	21	12	6,8	6	50	3	3	4	0	2	30
Germany	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ireland	0	0	0	0	NI	NI	0	0	0	0	0,04	0	0,2	0
Netherlands	0,8	3,04	1	0	0,17924	0	0,119	1,625	0,2	0	0,7	0,0	1,2	0
Norway	18,4	24,7	16,5	76,4	47	690	7	58	13	303	10	95	10	3 805
Spain	0	0	0	0	0	0	0	0	0	0	0	0	0	0
United Kingdom [1]	33,5	509,1	31,24	60,46	21	47	29	47	38	39	23	40	12	47
Total	**68**	**537**	**56**	**158**	**80**	**744**	**42**	**157**	**54**	**345**	**38**	**135**	**25**	**3 882**

Country	2008	
	≤ 1 T	> 1 T
Denmark	2	99
Germany	0	0
Ireland	0,004	0
Netherlands	0,7	3
Norway	7,5	156
Spain	0	0
United Kingdom [1]	17,03	20,3
Total	**27**	**278**

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.

Table 5c: Number of spills of chemicals and amount of chemical spills in tonnes/year, 2003-2008

	2003	2004	2005	2006	2007	2008
Number of spills of chemicals*	188	171	201	230	307	306
Amount of tonnage of chemicals discharged	1 520	1 067	950	840	1 181	1 071

Table 5d: Amount [k] spilled in kg per year

Prescreening category [A]	2005	2006	2007	2008
PLONOR [B]	1 164 846	559 929	1 000 374	895 579
List of Chemicals for Priority Action [C]	20	6	0	0
Inorganic LC_{50} or EC_{50} < 1 mg/l [D]	0	0	0	0
Biodegradation < 20% [E]	709 109	2 725	7 119	12 800
Substance meets two of three criteria [F]	2 556	11 259	30 516	1 980
Inorganic, LC_{50} or EC_{50} > 1 mg/l [G]	0	90	77	1 661
Ranking [H]	96 159	158 470	125 649	163 063
Total	1 972 690	732 479	1 163 735	1 075 083

Category

A. According to OSPAR Recommendation 2000/4 on a Harmonised Pre-screening Scheme for Offshore Chemicals (including its updates) 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) (Agreement Number: 2004-10).

C. Substance listed in the OSPAR List of Chemicals for Priority Action (LCPA) (including its updates) (Agreement 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% in OECD 306, Marine BODIS or any other accepted marine protocols; or less than 20% during 28 days in freshwater (ready test).

F. Substance meets two of the following three criteria:

marine protocol); or in the absence of valid results for such tests; less than 60%

301E);

II. bioaccumulation: BCF > 100 or log Pow >= 3 and molecular weight <700;

III. toxicity: LC50 < 10mg/l or EC50 < 10mg/l; if toxicity values <10 mg/l are derived from limit tests to fish, actual fish LC50 data should be submitted.

G. Inorganic substance with LC_{50} or EC_{50} over 1 mg/l.

H. Substance does not fulfill the above mentioned criteria (A-G) and should therefore be ranked according to OSPAR Recommendation 2000/4 on a Harmonised Pre-screening Scheme for Offshore Chemicals (including its updates) and the terminology used in this Recommendation.

I. Calculate the amount of substances on the basis of §1.6 of Appendix 1 of OSPAR Recommendation 2000/5 on a Harmonised Offshore Chemical Notification Format (HOCNF), including its updates

Spillage

K. All chemical spilled, including those related to accidental spillage of drilling fluids

Important! To avoid double reporting, the first appropriate category for the substance shall be chosen. This means that the PLONOR substances are chosen first, and the ranking substances are chosen last.

Part B: Cumulative Report

Table 6: Emissions to air, 1992-2008 *

CO_2 (10^6 tonnes)

Country	1992	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Denmark	NI	1,23	1,58	1,64	1,87	2,47	2,3	2,2	2,2	2,2	2,3	2,1	2,12	2,11	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	0,05	0,06	0,04
Ireland	NI	NI	0,10	0,025	0,11	0,1	0,09	0,08	0,07	NI	0,07	0,06	0,06	0,06	0,09
Netherlands	NI	1,22	1,11	1,19	1,59	1,29	1,20	1,33	1,33	1,27	1,27	1,33	1,29	1,39	1,4
Norway	7,5	8,1	8,9	8,47	9,34	9,38	10,09	11,1	10,79	11,40	11,34	12	12	11	13,8
Spain	0,86	NI	0,025	0,03	0	0	0,03	0,02	0,04	0,03	0,03	0,06	0,04	0,04	0,1
United Kingdom	79,36	20,46	15,9	19,1	20,9	19,8	18,3	19	19,9	18,79	18,52	18	16	17	15,6
Total	**88**	**31**	**28**	**30**	**34**	**33**	**32**	**34**	**34**	**34**	**34**	**34**	**32**	**32**	**33**

NO_x (10^3 tonnes)

Country	1992	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Denmark	NI	6,24	6,77	8,4	NI	13,62	12,3	5,35	5,30	5,30	7,2	6,5	6,7	7	8,23
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	0,036	0,031	0,05
Ireland	NI	NI	0,25	0,61	0,26	0,2	0,17	0,18	0,16	NI	0,16	0,145	0,270	0,245	0,52
Netherlands	NI	5,7	5,08	5,83	5,05	4,64	5,64	4,8	5	6,6	3,74	3,81	3,86	4,00	3,80
Norway	31,3	32	34,7	42,97	46,1	41	44,2	51	48,7	50,3	51,6	54,4	54	54	51
Spain	0,8	NI	0,113	0,14	0	0	0,11	0,04	0,08	0,07	0,0764	0,1288	0,0843	0,008	0,11
United Kingdom	195,7	56,69	38,8	57,8	66,7	55,8	45,8	53,53	69,43	61,25	60,1	59,0	52,0	52,0	52,3
Total	**228**	**101**	**86**	**116**	**118**	**115**	**108**	**115**	**129**	**124**	**123**	**124**	**117**	**117**	**116**

nm VOCs (10^3 tonnes)

Country	1992	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Denmark	NI	1	1	1	NI	2	9	10	10	8	5	4	2	3	2
Germany	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Ireland	NI	NI	0	0	0	0	0	0	0	NI	0	0	0	0	0
Netherlands	NI	10	7	5	8	8	6	6	5	5	4	4	4	4	5
Norway	122	99	182	189	174	191	213	229	198	165	132	94	80	73	50
Spain	0	NI	0	0	0	0	0	0	0	0	0	0	0	0	0
United Kingdom	208	76	59	107	80	75	73	87	93	79	66	49	51	54	41
Total	**331**	**185**	**249**	**302**	**262**	**276**	**301**	**332**	**307**	**257**	**207**	**151**	**137**	**134**	**98**

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

Table 6: Emissions to air, 1992-2008 * (cont'd)

CH_4 (10^3 tonnes)

Country	1992	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Denmark	NI	2	2	3	5	2	3	10	7	7	8	6	2	5	5
Germany	0	0	0	0	0	0	0	0	0	0	0	1	3	1	1
Ireland	NI	NI	1	1	3	16	1	25	0	NI	1	0	3	1	1
Netherlands	NI	55	41	25	21	20	15	16	13	19	11	12	12	14	16
Norway	11	13	26	29	26	29	29	34	32	31	31	29	26	25	31
Spain	1	NI	0	0	0	0	0	0	0	0	0	0	0	0	0
United Kingdom	226	70	56	79	72	65	56	57	52	51	55	41	37	48	42
Total	**238**	**140**	**126**	**136**	**126**	**132**	**104**	**142**	**105**	**108**	**106**	**90**	**83**	**94**	**95**

SO_2 (10^3 tonnes)

Country	1992	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Denmark	NI	NI	0,1	0,1	0,1	0,3	0,3	0,6	0,3	0,4	0,5	0,2	0,2	0,2	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	0,0	0,0	0,00
Ireland	NI	NI	0,0	0,0	0,1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,01
Netherlands	NI	0,4	0,5	0,4	0,2	0,2	0,1	0,2	0,2	0,2	0,1	0,1	0,2	0,2	0,14
Norway	NI	0,2	0,3	0,0	0,6	0,1	1,4	0,9	0,8	0,6	0,6	0,7	0,7	0,7	0,5
Spain	NI	NI	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,00
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	2,6	1,7	3,29
Total	**31,4**	**11,0**	**3,2**	**14,4**	**12,7**	**10,3**	**8,2**	**8,0**	**3,3**	**3,7**	**4,2**	**4,1**	**3,7**	**2,9**	**4,1**

Part B: Cumulative Report

Table 7: The use and discharge of offshore chemicals

Year: 2001-2008

The Netherlands have included 2 575 451 kg of unknown chemicals in their total in 2006

UK Report only contains a full report for the first ¾ of the year 2006. For the last quarter of 2006 the figures only contain a full report for production installations and not drilling installations

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	2006	2007	2008
Denmark	92 514 186	72 358 514	60 382 417	52 667 440	41 208 531	78 932 552	66 356 341	55 035 267
France	0	0	526 654	NI	NA	NA	NA	NA
Germany	21 300	4 000	1 098 862	977 651	2 138 463	716 405	710 225	503 527
Ireland	NI	NI	NI	830 542	9 287	1 549 666	3 876 616	6 274 318
Netherlands	23 995 497	NI	31 899 171	26 342 421	35 701 161	36 984 151	27 052 063	27 200 803
Norway	NI	NI	237 163 000	226 932 000	228 476 000	227 536 000	253 122 000	259 360 628
Spain	0	NA	1 272 695	0	0	0	0	0
United Kingdom	163 353 409	249 030 742	255 774 970	126 364 612	271 496 796	243 677 347	294 780 970	252 351 135
Total	**279 884 392**	**321 393 256**	**588 117 769**	**434 114 666**	**579 030 238**	**589 396 121**	**645 898 215**	**600 725 678**

Country	Quantity of chemicals discharged (kg)							
	2001	2002	2003	2004	2005	2006	2007	2008
Denmark	51 541 713	50 619 400	38 246 458	30 666 043	28 296 022	37 853 418	30 919 208	31 370 942
France	0	0	526 654	NI	NA	NA	NA	NA
Germany	19 170	3 600	517 593	761 332	1 036 263	347 565	342 003	503 282
Ireland	NI	NI	NI	460 057	2 566	1 040 761	1 660 002	4 203 349
Netherlands	12 580 602	NI	10 920 587	10 946 870	12 104 182	15 093 836	8 191 288	12 878 422
Norway	115 098 100	102 934 930	78 976 000	63 582 000	56 370 000	63 424 400	73 624 000	76 539 183
Spain	0	NA	976 450	0	0	0	0	0
United Kingdom	72 045 032	109 474 671	113 811 824	64 219 437	117 027 290	102 846 899	104 733 835	110 746 879
Total	**251 284 617**	**263 032 601**	**243 975 566**	**170 635 739**	**214 836 323**	**220 606 879**	**219 470 336**	**236 242 057**

* 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 7: The use and discharge of offshore chemicals
Year: 2001-2008

Table 7b: Quantity of offshore chemicals used and discharged in kg/year, in inorganic substances with LC50 or EC50 > 1 mg/l*

Country	Quantity of chemicals used (kg)							
	2001	2002	2003	2004	2005	2006	2007	2008
Denmark				14 196 383	12 738 121	16 361 467	7 996 987	14 435 908
France				NA	NA	NA	NA	NA
Germany				0	0	0	0	0
Ireland				NI	0	0	2 252	745
Netherlands				2 032 827	1 916 271	3 066 667	367 282	815 948
Norway				NI	2 671 000	2 654 000	1 860 000	(1)
Spain				0	0	0	0	0
United Kingdom				33 542	73 409	949 303	2 326 787	4 150 103
Total				**16 262 752**	**17 398 801**	**23 031 437**	**12 553 308**	**19 402 704**

Country	Quantity of chemicals discharged (kg)							
	2001	2002	2003	2004	2005	2006	2007	2008
Denmark				980 564	138 620	408 828	169 353	1 484 608
France				NA	NA	NA	NA	NA
Germany				0	0	0	0	0
Ireland				NI	0	0	870	545
Netherlands				240 660	172 416	364 578	179 066	169 047
Norway				NI	137 000	126 000	143 000	(1)
Spain				0	0	0	0	0
United Kingdom				25 964	64 902	376 830	483 930	594 504
Total				**1 247 188**	**512 938**	**1 276 236**	**976 219**	**2 248 704**

* No data have been submitted prior to 2004

Part B: Cumulative Report

Table 7: The use and discharge of offshore chemicals
Year: 2001-2008

Table 7c: 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, d, e, f, g

Country	Quantity of chemicals used (kg)							
	2001	2002	2003	2004	2005	2006	2007	2008
Denmark	16 890 132	29 776 007	28 646 471	17 001 572	14 093 489	1 378 038	12 049 738	14 703 054
France	0	0	3 025	NA	NA	NA	NA	NA
Germany	55 700	84 900	361 531	424 432	387 282	127 403	124 599	4 333
Ireland	NI	NI	NI	NI	0	150 115	151 051	722 136
Netherlands	7 339 587	NI	3 809 425	2 811 406	2 809 975	5 490 597	5 443 977	7 572 521
Norway[1]	NI	NI	79 178 000	83 915 000	82 626 000	87 938 000	93 313 000	95 347 550
Spain	0	NA	16 950	0	0	0	0	0
United Kingdom	163 288 565	49 435 450	27 483 033	63 147 289	44 840 086	100 831 149	100 834 384	78 776 917
Total	**187 573 984**	**79 296 357**	**139 498 435**	**167 299 699**	**144 756 832**	**195 915 302**	**211 916 749**	**197 126 511**

Country	Quantity of chemicals discharged (kg)							
	2001	2002	2003	2004	2005	2006	2007	2008
Denmark	5 009 968	4 580 064	4 194 417	3 191 761	3 223 911	4 500 119	4 629 994	3 833 698
France	0	0	3 025	NA	NA	NA	NA	NA
Germany	0	0	19 944	69 099	41 275	11 223	3 659	52
Ireland	NI	NI	NI	NI	0	110 604	61 016	242 717
Netherlands	311 191	NI	157 936	157 648	193 412	254 341	263 184	435 387
Norway[1]	11 815 950	10 897 930	10 977 000	10 599 000	10 103 000	10 952 000	11 880 000	12 956 914
Spain	0	NA	3 450	0	0	0	0	0
United Kingdom	48 535 999	16 904 059	11 101 380	29 930 079	14 056 179	13 144 219	13 866 642	13 596 227
Total	**65 673 108**	**32 382 053**	**26 457 152**	**43 947 587**	**27 617 777**	**28 972 506**	**30 704 495**	**31 064 995**

Table 7: The use and discharge of offshore chemicals
Year: 2001-2008

Table 7d: 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	2006	2007	2008
Denmark	0	900	606	136	0	0	0	10
France	0	0	0	NA	0	0	0	0
Germany	0	0	0	0	0	0	0	0
Ireland	NI	NI	NI	NI	0	0	0	0
Netherlands	2 042	NI	302	0	0	0	0	0
Norway	NI	NI	844	800	2 505	1 094	497	146
Spain	0	NA	0	0	0	0	0	0
UK	0	222	2 090	2 285	2505	1896	2128	3773
Total	**2 042**	**1 122**	**3 842**	**3 221**	**5 010**	**2 990**	**2 625**	**3 929**

Country	Quantity of chemicals discharged (kg)							
	2001	2002	2003	2004	2005	2006	2007	2008
Denmark	0	300	60	14	0	0	0	1
France	0	0	0	NA	NA	NA	0	0
Germany	0	0	0	0	0	0	0	0
Ireland	NI	NI	NI	NI	0	0	0	0
Netherlands	145	NI	271	0	0	0	0	0
Norway	917	765	240	200	30	213	1	140
Spain	0	NA	0	0	0	0	0	0
UK	0	46	171	191	191	141	69	42
Total	**1 062**	**1 111**	**742**	**405**	**221**	**354**	**70**	**183**

* 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: 2001-2008

Table 7e: 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)							
	2001	2002	2003	2004	2005	2006	2007	2008
Denmark	18 164 615	85 194	128 622	14 839	8 115	12 550	9 950	10 502
France	0	0	0	NA	NA	NA	0	0
Germany	0	0	2 000	0	0	0	0	0
Ireland	NI	NI	NI	NI	0	0	0	0
NL	260	NI	0	31	0	0	0	0
Norway	NI	NI	0	0	1 000	0	20	0
Spain	0	NA	0	0	0	0	0	0
UK	0	0	0	0	10 333	1 510	910	1 720
Total	**18 164 875**	**85 194**	**130 622**	**14 870**	**19 448**	**14 060**	**10 880**	**12 222**

Country	Quantity of chemicals discharged (kg)							
	2001	2002	2003	2004	2005	2006	2007	2008
Denmark	156 968	43 443	58 553	1 215	54	117	250	2
France	0	0	0	NA	NA	NA	0	0
Germany	0	0	0	0	0	0	0	0
Ireland	NI	NI	NI	NI	0	0	0	0
NL	1	NI	0	3	0	0	0	0
Norway	771	100	0	0	0	0	1	0
Spain	0	NA	0	0	0	0	0	0
UK	0	0	0	0	10 306	1440	864	1596
Total	**157 740**	**43 543**	**58 553**	**1 218**	**10 360**	**1 557**	**1 115**	**1 598**

Table 7: The use and discharge of offshore chemicals
Year: 2001-2008

Table 7f: 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	2006	2007	2008
Denmark	1 041 714	1 324 413	1 813 142	1 782 941	894 141	582 599	302 503	766 936
France	0	0	0	NI	NA	NA	NA	NA
Germany	0	0	3 239	4 333	4100	1516	1 400	0
Ireland	NI	NI	NI	NI	0	0	12 319	8 730
NL	1 112 344	NI	4 279 111	633 725	3 433 667	885 546	3 173 171	303 012
Norway	NI	NI	3 450 000	3 769 100	3 066 300	2 935 500	3 024 000	3 141 149
Spain	0	NA	0	0	0	0	0	0
UK	12 826 964	4 934 729	8 240 728	4 227 698	7 244 942	6 419 857	3 974 251	3 156 299
Total	**14 981 022**	**6 259 142**	**17 786 220**	**10 417 797**	**14 643 150**	**10 825 018**	**10 487 644**	**7 376 126**

Country	Quantity of chemicals discharged (kg)							
	2001	2002	2003	2004	2005	2006	2007	2008
Denmark	200 844	166 387	163 236	123 729	106 127	92 047	44 682	56 457
France	0	0	0	NI	NA	NA	NA	0
Germany	0	0	3 104	634	4 100	1 458	1 400	0
Ireland	NI	NI	NI	NI	0	0	651	0
NL	9 592	NI	64 041	77 473	42 716	35 123	6 179	5 775
Norway	733 970	796 810	331 000	211 490	62 270	18 661	13 900	10 515
Spain	0	NA	0	0	0	0	0	0
UK	2 247 435	1 328 207	1 547 258	1 734 676	1 889 783	1577219	660 055	661 647
Total	**3 191 841**	**2 291 404**	**2 108 639**	**2 148 002**	**2 104 996**	**1 724 508**	**726 867**	**734 394**

Part B: Cumulative Report

Table 7: The use and discharge of offshore chemicals

Year: 2001-2008

Table 7g: 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	2006	2007	2008
Denmark	1 695 332	1 353 975	1 341 775	1 494 033	1 322 226	1 066 216	575 771	459 550
France	0	0	0	NA	NA	NA	NA	NA
Germany	18500	20 337	1 132 505	652 623	2 631 107	878 855	879 156	6 972
Ireland	NI	NI	NI	26	0	13 241	604 258	35 612
NL	919 017	NI	3 918 807	2 097 535	8 972 101	5 291 265	2 533 475	185 157
Norway	NI	NI	4 023 000	4 069 000	3 428 700	2 761 900	2 363 000	1 182 315
Spain	0	NA	0	0	0	0	0	0
UK	6 339 638	9 323 127	9 836 007	8 014 175	4 630 943	1 505 806	6 056 927	2 712 894
Total	**8 972 487**	**10 697 439**	**20 252 094**	**16 327 392**	**20 985 077**	**11 517 283**	**13 012 587**	**4 582 500**

Country	Quantity of chemicals discharged (kg)							
	2001	2002	2003	2004	2005	2006	2007	2008
Denmark	347 438	332 519	206 293	301 211	319 223	193 506	76 655	57 512
France	0	0	0	NA	NA	NA	NA	NA
Germany	175	183	1 372	9 429	9 316	50	50	0
Ireland	NI	NI	NI	1	0	4 364	880	3 692,79
NL	5 703	NI	11 368	39 107	16 560	13 811	10 182	28 462
Norway	327 472	210 150	293 000	81 900	33 985	23 450	9 900	4 579
Spain	0	NA	0	0	0	0	0	0
UK	895 102	1 051 622	1 318 525	4 062 814	1 399 510	631 877	1 234 498	918 515
Total	**1 575 890**	**1 594 474**	**1 830 558**	**4 494 462**	**1 778 594**	**867 058**	**1 332 165**	**1 012 761**

* 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.

Part B: Cumulative Report

Table 8: Total discharges and spillage of dispersed oil, in tonnes, 1984-2008

Country	1984	1990	1992	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Denmark	763	543	81	178	196	172	173	185	201	679	305	322	377
Germany	0	NI	NI	NI	NI	NI	0	0	0	3	0	0	0
Ireland	0	NI	NI	NI	NI	NI	0	1	0,042	0,245	0	0	NI
Netherlands	1 153	546	285	275	232	288	284	205	169	190	256	149	114
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	3 321
Spain	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
Total	**27 176**	**17 684**	**14 192**	**10 888**	**11 783**	**12 150**	**16 752**	**13 872**	**13 643**	**9 426**	**9 782**	**9 209**	**9 157**

Country	2004	2005	2006	2007	2008
Denmark	487	452	389	418	481
Germany	0	0	0	0	0
Ireland	0	0	0	0	0
Netherlands	121	108	114	157	144
Norway	2 718	3 149	2 484	5 441	1 791
Spain	0	0	0	0	0
United Kingdom [1]	5 355	5 047	4 420	3 019	3 198
Total	**8 681**	**8 756**	**7 407**	**9 035**	**5 614**

Notes :Spillages are not taken into account for 1990.
From 1997-1999, UK data include OPF.

[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 2a Part A, Table 2b Part A and Table 5a of Part A

Table 9: Total production in oil equivalents, in toeq, 2001-2008

	2001	2002	2003	2004	2005	2006	2007	2008
Denmark	27 681 479	28 417 000	25 502 326	29 220 320	28 349 771	25 654 788	25 034 608	25 654 788
Germany	1 800 000	2 169 437	1 990 664	2 120 124	1 024 948	1 890 000	1 724 604	1 468 139
Ireland	780 172	112 027	762 285	1 014 893	592 617	514 683	301 455	524 423
The Netherlands	23 024 869	22 307 046	19 905 219	23 958 559	20 380 637	17 752 641	40 793 169	19 601 935
Norway	251 400 000	241 000 000	245 886 380	264 600 000	245 262 000	233 976 120	231 697 250	249 282 000
Spain	448 300	466 045	142 355	269 005	119 660	37 693	6 628	6 862
United Kingdom	211 000 000	209 000 000	199 000 000	182 000 000	164 000 000	149 000 000	143 000 000	134 900 000
TOTAL	516 134 820	503 471 555	493 189 229	503 182 901	459 729 633	428 825 925	442 557 714	431 438 147

Table 10: Discharges of radioactive substances in produced water in terabecquerel (TBq), in 2008

Country	OSPAR Region	Pb-210	Ra-226	Ra-228
Denmark	II	9,24E-04	1,37E-02	9,22E-03
Ireland	III	2,90E-06	4,40E-06	8,90E-07
Germany	II	1,60E-06	2,90E-05	2,50E-06
Netherlands	II	8,20E-03	1,30E-01	1,40E-01
Norway	I	5.00E-03	4,50E-02	4,10E-02
Norway	II	3,70E-02	4,16E-01	3,31E-01
UK	II	5,10E-02	2,14E-01	1,51E-01
UK	III	1,17E-04	2,15E-03	1,69E-03
Total		**0**	**1**	**1**

	Total alpha	Total beta
2006	6,9	4,67
2007	7,41	4,94
2008	6,76	4,54

The calculations for alpha and beta are good estimates of activities discharged, rather than a measured value.

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