



PETROLEUM SAFETY AUTHORITY
NORWAY

ANNUAL REPORT 2012

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FOREWORD

This publication is the facts section of the annual report from the Petroleum Safety Authority Norway (PSA) for 2012. It should be read in conjunction with our publication entitled Safety – status and signals 2012-2013, which summarises issues of particular concern to us last year and looks ahead to the biggest challenges we foresee in the future.

The following pages provide factual information on conditions which affected our operations in 2012. That includes the priorities we set for our supervisory activities and other work.

Our annual report on Trends in risk level in the petroleum activity (RNNP), which is published both in a complete form and in a summary version, contains an extensive overview of incidents, accidents and injuries in 2012. It provides a comprehensive review of the risk picture in this sector and its development. The summary version is available in English.

We hope that these publications will collectively provide a good overall picture of the safety challenges faced by the petroleum industry in Norway, the responsibilities of the participants in this activity, and how we as the regulatory authority supervise industry observance of these responsibilities.

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1. SUPERVISION OF SAFETY IN THE PETROLEUM ACTIVITY

The concept of "supervision" embraces all the activities we pursue in order to

- form a picture of the safety status at one or more of the players in the petroleum business
- see to it that all the players conduct their activities in accordance with regulatory and/or in-house requirements
- consider applications for consents, acknowledgements of compliance (AoCs) and plans for development and operation/ installation and operation (PDO/PIO)
- assess whether compensatory measures adopted are adequate for operating acceptably
- investigate conditions relating to a serious undesirable incident
- conduct supervision pursuant to the Act on Pay Agreement Application (nonrefundable activity)
- influence the players with a view to improving the level of safety.

Our annual activity plans are based on a number of factors which reflect the reality in which we exercise our regulatory role, and the requirements and expectations set for us through the Ministry of Labour.

To achieve the best possible application of our resources in meeting the established targets, we set a number of main priorities every year which form the basis for our supervisory activities. Our main priorities for 2012 related to:

- barriers
- management and major accident risk
- prevention of acute discharges and safe pollution reduction
- groups particularly exposed to risk.

These are areas we prioritise ahead of others. This means that the plans laid for supervision in these areas have by and large been fulfilled. The four main priorities are of equal importance, so the order in which they are listed is not intended to reflect any relative significance.

Work on our main priorities is supplemented by a number of other activities which are significant for safety. These may be restricted to a specific company, a particular type of activity or the like. They embrace both audits and other work such as processing applications, dealing with incidents and status meetings with the companies.

A summary is provided below of the chal-

lenges we have faced, the activities we have pursued and what we have achieved within our various main supervisory priorities.

1.1 Overall assessment of results in 2012

We by and large implemented our plans for 2012, which were based in part on our main priorities and commissions from the ministry.

Making the players more conscious of their responsibilities is the guiding principle for all our efforts to help ensure that the industry develops and maintains a high level of safety. We ask questions about – and thereby contribute to improvements in – that part of the management system in the companies which aims to ensure that they are capable of establishing on their own account that their operations are acceptable and comply with the regulations at all times.

No known quantitative methods are available for determining the impact of our overall exercise of our regulatory authority. Nevertheless, a number of indicators suggest that this supervision has a positive effect. Internationally, incidents such as the Macondo accident in the Gulf of Mexico during 2010 have prompted a number of official investigation teams to point to the North Sea nations and Norway as pioneers in terms both of the level of safety and of models for government regulation of the industry. Recommendations from these investigations underline the relevance and appropriateness of our main supervisory priorities for 2012, which are being maintained with minor adjustments in 2013.

The level of safety in the Norwegian petroleum industry is basically high. But it is not the case that this level, once achieved, will be self-sustaining. A continuous commitment is required to prevent it from deteriorating over time. Accordingly, the fact that the overall risk level in 2012 showed no improvement from the previous year, as measured through our work on the annual RNNP report, does not conflict with our assessment of our performance in reaching our goals.

We again devoted resources in 2012 to developing and operating our website in an active and up-to-date manner. We see that openness in the form of publishing audit reports, decisions and so forth, and the volume of information which is thereby made available contribute to the understanding of risk conditions and challenges in the industry.

It is also our view that the international collaboration in which we participate contributes to good safety results, particularly in a long-term perspective. The mechanism here is that the various national regulators, by exchanging experience and discussing regulatory requirements and methods for

exercising their official duties, present clear similarities to an industry which is international by nature. Such similarity in exercising the regulatory role also provides the industry with greater predictability in satisfying official requirements. Important arenas for international collaboration in 2012 remained the International Regulators' Forum (IRF) and the North Sea Offshore Authorities Forum (NSOAF). International collaboration is described in greater detail in chapter 2.

1.2 Developments for accidents and injuries

No fatal accidents occurred during 2012 within our area of responsibility offshore and on land. Three people have died in occupational accidents over the past 10 years, most recently in 2009. Preventing fatal accidents in the petroleum industry is a mandatory goal.

A brief summary of the most important developments for accidents and injuries in 2012 is provided below. See the annual RNNP report published simultaneously with this document for a more detailed presentation of the risk picture.

1.2.1 Risk picture for offshore facilities

Figures from the RNNP process for 2012 show that the overall risk for loss of life associated with major accidents appears to have risen somewhat over the latest three-year period. The increase is small for production installations but significant for mobile facilities. The rise over the past three years comes after a relatively long period with a positive trend.

This risk assessment is based on an evaluation of near-misses with the potential to develop into a major accident. An evaluation based on historical figures does not deal with risk as a phenomenon, since risk by its nature is something which concerns the future. On the other hand, it reflects the industry's ability to manage risk. This is our primary concern, and is what makes the RNNP data an important tool in planning our supervision.

The slightly negative trend has occurred even though the number of near-misses with a major accident potential shows a clear decline. In particular, hydrocarbon leaks have been sharply reduced to six leaks greater than 0.1 kilograms per second (kg/s) in 2012. On the other hand, several incidents have occurred – especially in 2012 – with a relatively large potential for loss of life. Two hydrocarbon leaks greater than 10 kg/s were experienced in 2012, along with two serious incidents related to loss of stability and one related to structural integrity.

The number of serious personal injuries in Norway's offshore industry declined from 26 in 2011 to 23. This meant that the serious personal injury frequency was reduced from 0.59 per million working

hours to 0.5. That represents a statistically significant reduction compared with the previous 10-year period, and thereby means that the positive trend of the past few years was maintained.

The decline in 2012 related to operator personnel on production installations, where the frequency was as low as 0.19, while operator employees experienced a slight increase. For contractor personnel, who have traditionally had a higher injury frequency than operator employees, a slight rise was recorded in 2012 after a substantial decline over many years.

Following a small increase on mobile units during 2011, the serious personal injury frequency again declined in 2012. This frequency is substantially below the average for the past five years.

No incidents occurred in 2012 which led to serious environmental harm. Well incidents represent the biggest contribution to the risk of environmental harm. While their number has shown a positive trend for many years, they rose from 13 in 2011 to 16. Although the number of such incidents was higher a number of years ago, it is nevertheless desirable that they continue to decline. We are accordingly following up these incidents closely, particularly with a view to identifying underlying causes related to management and control, experience transfer, learning from similar events and safety culture.

Six hydrocarbon leaks greater than 0.1 kilograms per second (kg/s) were registered in 2012, compared with 11 the year before. That represents the lowest level since the RNNP process began in 1996. Hydrocarbon leaks are divided into categories by the rate of leakage. Two of the 2012 leaks fell into the largest category – in other words, greater than 10 kg/s. The contribution to the overall major accident risk was therefore considerably higher in 2012 than in the three preceding years.

The number of ships on a collision course has declined substantially. Only eight incidents were registered in 2012, the lowest for the past 10 years. Twenty were recorded in 2011. The positive trend must be attributed primarily to the effect of controlling sea areas around installations from the traffic management centres.

One collision occurred between installations and supply ships in 2012. The number of such incidents has been reasonably stable over the past decade at two-three per year.

Incidents related to structures and maritime systems showed an increase from 11 in 2010 to 17 in 2011, of which 12 related to mobile facilities. Three of the incidents were classed as serious. An anchor on Floatel Superior came loose and punctured the hull. One incident on Scarabeo 8 led to unintended filling of a ballast tank so that the facility listed. The third

incident in the most serious category involved cracks in the grouting around the legs of the Yme installation.

Figures from the RNNP furthermore reveal that the industry faces challenges in managing safety-critical barriers. The failure rate for key barriers related to hydrocarbon-bearing systems lies above the expected value for the industry as a whole. Results for barrier management at installation level show that certain facilities are substantially above the expected failure rate. This could mean that certain facilities operate with an availability of certain safety-critical barriers which is lower than the level required for safe operation.

Where working environment risk is concerned, see section 1.2.4 of this report on results for our main priority concerning groups particularly exposed to risk.

1.2.2 Risk picture at land-based plants

Factors influencing risk at the land-based plants have clear similarities with corresponding factors offshore, but may also differ. Efforts have been made in the RNNP process to adapt indicators so that they reflect the risk picture at the land-based plants as closely as possible.

One factor special to the land-based plants is the possibility that third parties – in other words, people who live or are present in the vicinity – could be exposed to accidents.

Seven incidents which fulfilled the criteria for serious personal injuries were reported in 2012, compared with three the year before and 11 in 2009. Hours worked increased slightly, so that the serious personal injury frequency rose from 0.3 to 0.6 per million working hours. However, the increase in 2012 is not statistically significant compared with the average for 2006-11.

Four non-ignited hydrocarbon leaks occurred, compared with eight in 2011. In addition came one leak which ignited. By comparison, 22 leaks occurred in 2008. It thereby seems that the work being devoted to reducing the number of hydrocarbon leaks on the NCS is also yielding results at the land-based plants.

In addition to the ignited leak, three other fires occurred - all in the "small" category. Furthermore came two cases of toxic emissions, 26 incidents involving dropped objects and one vehicle accident which caused personal injury.

The indicator for exposure to noise is calculated on the basis of noise levels and times spent in the noisiest areas as well as contributions from noisy work operations. It shows that a number of worker categories involved in process and maintenance activities experience exposures which exceed the limit value of 85 dBA.

Twelve noise-related injuries were reported from the land-based plants in 2012, as against seven in 2011. By comparison, 805 such injuries were reported from offshore operations. The indicator for noise level developed in the RNNP process showed small changes from 2011. Observed variations between the plants can be attributed to differences in current activities, such as

certain maintenance jobs which involve high noise exposure.

1.3 Main priorities in 2012 – experience and results

1.3.1 Barriers

The main purpose of barrier management is to establish and maintain barriers, and thereby to manage the risk picture faced at any given time by preventing undesirable incidents and/or limiting the consequences should such incidents occur.

BARRIERS

In this context, barriers mean systems of functions which can prevent or reduce harm in the event of an undesirable incident.

They can be divided into physical and non-physical. The latter embrace operational or organisation barriers. A barrier will often involve at least one physical element, such as a valve. Associated elements could, for instance, include a valve activator and its operational systems and components.

Barriers are built into designs and procedures in accordance with regulations and standards, with the aim of reducing the risk for people, the environment and material assets.

Barrier management thereby embraces processes, systems, solutions and measures which must be in place in order to ensure the necessary risk reduction and to meet the requirements for acceptable operation.

It accordingly occupies a key place in management by the companies of the overall risk in their business, and supervision in this area has accordingly long been one of our main priorities.

The issue is closely related to the subject of management and major accident risk, which has been another of our main priorities for a number of years. Initiatives launched and decisions taken by management will influence the operating parameters which are significant for barrier management, and thereby for major accident risk. Observations from our audit

activities, experience from major accidents internationally and widely recognised accident theories often highlight the key role played by management in managing major accident risk.

On the basis of regulatory requirements for barrier management, our supervision focuses on ensuring that

- barriers are established which can both reduce the probability of errors and hazards/accidents developing, and limit possible damage and drawbacks,
- barriers continue to fulfil their function throughout the working life of the installation or land-based plant,
- performance requirements are established for technical, operational and organisational elements required for the individual barrier to be effective,
- strategies and principles are established for designing, using and maintaining barriers.

We updated our document on Principles for barrier management in the petroleum industry during 2012. Among a number of changes, we incorporated considerations related to differences between technical, operational and organisational barrier elements and conditions affecting performance. This document has been posted to our website, and we have received positive feedback on its use and value.

1.3.2 Management and major accident risk

Results from audits in earlier years, experience from major international accidents and recognised accident theories all point to the key role played by management for major accident risk.

We pursued a number of activities directed at a variety of players under this main priority in 2012. These included audits on offshore installations and at land-based plants, work on technical projects, organisation of seminars, and participation in national and international conferences on managing major accident risk.

Through this main priority, we pursued activities which contributed a clear driving force to companies in their efforts to reduce major accident risk and strengthen the basis for further development of supervisory methodology and regulations.

We also raised questions in our supervision during 2012 concerning risk management at various management levels, company processes for identifying, reducing and managing risk, how risk management is integrated in company management systems, and how it is incorporated in management processes at every level in the companies.

- Our supervisory activities have been based on
- decisions and initiatives taken by company managements which define operating parameters,
 - individual players and relations between

players in the value change, as these have been altered and developed through new forms of operation,

- learning at management level and management's contribution to encouraging learning in the organization,
- continuous improvement at the player level and in the value chain,
- special experience from Deepwater Horizon, where the responsibility of the drilling contractors, their understanding and exercise of these and their follow-up of their own business occupied a central place.

We have increased the scope of our audits on drilling facilities. For selected units, we have also followed up the respective operator companies they have worked for. Supervision here has been directed in part at the way the operator company discharges its "see to it" duty.

Special activities have also been directed at the management of drilling contractors which have received AoCs for their facilities. Attention here has been focused on the division of responsibility and roles between contractor and operator in relation to preventing major accidents.

Audits have revealed that securing the capacity and expertise needed to conduct the business represents a growing challenge. That makes corresponding demands on tailoring activities to match available resources.

Accidents such as Deepwater Horizon, Montara, Texas City, Longford and the long series of incidents these form part of demonstrate that we know why such events occur. Our supervisory activities make it increasingly clear that this knowledge is something which particularly characterises the companies which appear to have come furthest in incorporating experience from incidents large and small in their own organisation. They display consistency and discipline, but above all a respectful attitude to the challenges posed by managing and relating to risk.

1.3.3 Preventing acute discharges

On the basis of our role in accident prevention, we contribute to minimising the risk of acute discharges through our overall commitment to maintaining a high level of safety in petroleum operations. This commitment covers the whole range of our activity, from continued development of the regulations, through supervising compliance with these, to monitoring risk trends over time and collaborating with the parties on important improvement processes.

We also follow up how new environmental requirements affect safety and the working environment as a consequence of innovative technology, novel working methods and new modes of organisation. We check that the companies, through good management and control, ensure that these changes do not have a

negative impact – and preferably have a positive effect – on safety and the working environment. That in turn lays an important foundation for safe operation which minimises the threat of acute discharges.

In part through work related to development solutions and award criteria, we have contributed to ensuring that accident prevention is tailored to the risk potential – including in areas where the consequences of an accident for the natural environment would be more serious than usual. This means that preventive measures must relate to the possible impact on the environment.

The far north of the NCS has attracted growing activity and interest over the past few years. Our attention also focused in 2012 on assessments related to the special safety and working environment challenges – with risk factors and uncertainties – which the petroleum industry could encounter in these waters.

By developing well-adapted regulations and by basing our supervision on these, we help to lay the basis for an important measure related to the climate issue. Our role with regard to carbon capture, transport and storage is to check that this approach is pursued in an acceptable manner with regard to safety and the working environment. We have initiated a review of relevant regulations to ensure that these are further developed so that they will also be appropriate for activities related to carbon capture, transport and storage. We have helped to improve the knowledge base and have involved ourselves with these issues in the context of both research and development (R&D) and the setting of operating parameters.

We are also making contributions to the technical aspects of work on management plans for the various sea areas. Through our participation, we seek to ensure that accident-prevention measures receive the necessary attention in the planning process.

Our role where prevention of harm to the natural environment is concerned relates to the accident prevention aspect. It is a challenge that attention in the media and among the general public focuses particularly on the emergency response aspects of an oil discharge – in other words, measures to limit the consequences of a spill. Despite the importance of good emergency preparedness, a one-sided concentration on such measures may reduce understanding of the consideration that preventing accidents which cause discharges is the primary way to avoid damage from an acute oil spill. We were again concerned in 2012 to convey this message in as many contexts as possible.

Viewed overall, we believe that we have helped to enhance the attention paid to the safety and working environment consequences of climate- and environment-related measures. We also take the view that more people than before have acquired a clearer perception that we play an important role in achieving national environmental and climate goals through our work on safety and the working environment in the petroleum activity.

1.3.4 Groups particularly exposed to risk

In our audits directed at worker categories particularly exposed to risk, we have adopted an approach which involves a close link between actual risk conditions at group level and the operating parameters which could be significant for risk management. Seeing risk conditions as a whole, rather than simply factor by factor, has also been a consideration.

Our work on groups particularly exposed to risk during 2012 aimed to help the industry both to identify groups exposed to risk and to initiate measures for reducing risk for these categories. A total of 16 different groups have been assessed through this approach since 2007. For some categories, a high exposure to a number of risk factors coincides with inadequate operating parameters. We accordingly again devoted particular attention in 2012 to the insulation, scaffolding and surface treatment (ISS) trades and to worker categories with a high exposure to noise.

The objective of our work in 2012 was to help ensure that

- the companies continue to develop a coherent picture of the risk of illness and injury faced by groups of employees, and make active use of new knowledge in a risk-based approach where efforts are directed at groups which have the greatest needs and which offer the biggest effect from the action taken
- companies implement risk-reducing measures directed at particularly exposed groups
- the industry develops good operating parameters for HSE work directed at groups exposed to risk
- employers and employees play a more active role in efforts to reduce risk for particularly exposed groups
- the risk of hearing damage and conditions for contract personnel are given emphasis in follow-up work by the companies
- work on an inclusive workplace is followed up in the petroleum industry.

Audits have shown that groups of contractor employees generally face more risk factors in their working environment than operator personnel, and that their exposure to these factors is higher. We see, too, that management elements intended to ensure a fully acceptable working environment are weaker for contractor employees than for operator personnel.

Our supervision has also revealed that such operating parameters as contractual conditions, financial terms and work organisation can affect the opportunities of contractor companies to reduce risk. At the same time, little attention has been paid to the significance of these operating parameters for the risks facing exposed groups.

In our purposeful supervision, we have given emphasis to helping raise awareness of the importance

operating parameters may have for the risks facing exposed groups. Audits in 2007-12 have covered all the land-based plants, operator companies with installations in the production phase, vessel owners, and various contractors. The goal has been to contribute to the development of operating parameters in the operator/contractor relationship which could reduce working environment risk.

Our supervisory activities in 2012 paid particular attention to operating parameters which are significant for the ISS trades and for drilling and well. In recent years, the operator companies have awarded direct contracts to ISS contractors which were previously sub-contractors to maintenance and modification contractors. During 2012, we conducted verifications offshore and held a meeting with ISS contractors to follow up whether this and other changes in operating parameters are significant for the way risk affecting ISS worker categories is being dealt with.

A supervisory activity launched in 2012 will assess how Statoil, through the operating parameters it sets for contractors and the way it follows up these companies, makes provision for acceptable drilling and well operations and contributes to enhancing safety and reducing working environment risk. Statoil, drilling contractors and drilling and well service companies will be involved in this activity during 2013.

We registered in 2012 that our supervision appears to have contributed to increased awareness in the industry about the importance of identifying and following up groups exposed to risk, and the importance of operating parameters in that context.

HSE follow-up of contract workers was one of our supervisory priorities in 2012. This group includes the majority of foreign employees in the Norwegian petroleum industry, and we also know that the work it does is often associated with risk (ISS, for instance). We conducted two offshore audits during 2012 where both HSE monitoring of contract personnel and follow-up of language and cultural differences were issues. Contract labour was also a topic at the contractor seminar staged in 2012 in collaboration with the Norwegian Labour Inspection Authority.

We collaborated with the Labour Inspection Authority and the Fafo research foundation in 2012 on developing knowledge about contract labour.

Our audits have exposed nonconformities in the way contract workers are followed up with regard to working environment risk. Inadequate clarification of roles and responsibilities for such follow-up has also been identified. We will continue to follow this up during 2013.

We also saw signs of improvement in 2012 at a number of contractors with regard to the way groups exposed to risk are followed up, and we consider it positive that many companies have established internal projects and implemented measures directed to a greater extent at groups particularly exposed to risk.

Results from our commitment to particularly exposed groups were communicated during 2012 in various fora, conferences and seminars for relevant players in the industry.

Exposure to noise and chemicals has been an issue in more broadly based audits involving groups exposed to risk, and has been to some extent the subject of special follow-up activities.

We organised a seminar in 2007 involving specialists with expertise relevant for groups particularly exposed to risk. This expert seminar helped to formulate goals for our commitment to supervising exposed groups. We staged a follow-up event in 2012 to acquire increased understanding of developments over the six-year period and to assess the relevance of groups particularly exposed to risk in our future commitment. The experts taking part made it clear that "groups particularly exposed to risk" represented a concept which had made a substantial contribution to highlighting risk conditions for categories of contractor employees, and which meant it had become more legitimate for contractors to discuss the significance of operating parameters with the operator companies.

Chemical health hazards

The industry's chemical project concluded with a summing-up conference in December 2011. Some project activities still remained to be completed towards the end of 2012, along with a final summing-up and recommendations by the project team.

We have followed up work by the companies to convert the findings of the chemical project into better practice. Our overall impression is that the awareness of the companies has been enhanced, that they have strengthened specialist expertise and the quality of risk identification and assessment, and that the chemical working environment has a high priority in the HSE agenda at the companies. However, considerable variations exist between companies and segments in the industry.

Our plans for 2013 include a systematic acquisition of data to provide an overall picture of follow-up by the companies in the chemical area following the industry project.

Noise

At the request of the Safety Forum, a joint industry project was established in late 2011 to reduce noise in petroleum operations. We are represented by an observer in this project. In March 2012, we joined force with the project team to stage an industry seminar for some 200 participants with noise-reducing measures as the main topic. This session illustrated that a large number of measures are available, covering most problem areas.

Our follow-up of the companies reveals that little advantage is taken of opportunities for noise reduction. Statoil reduced noise-risk hours on its facilities by about 9 000 in 2012. That is a small figure considering

that the company has some 420 000 risk-hours in all – which do not include self-generated noise from such sources as hand-held tools.

Much attention has been devoted to following up noise on mobile facilities. Most of this work has related to AoCs for new units. A separate study devoted to the West Elara facility revealed that weak follow-up practice in the design and construction phases had resulted in noise standards being considerably exceeded and led to substantial additional costs for solving this later.

The RNNP's noise indicator for 2012 was largely stable, but with a trend towards reduced noise burdens for some groups. A total of 819 cases of new or aggravated hearing damage were reported – the highest annual figure ever. The large number of hearing-damage cases is likely to reflect the considerable attention being paid to such injuries and the improvements in company routines for registering them. Previously hidden statistics are probably now emerging.

1.4 Other results from supervision

1.4.1 Investigation of incidents

We have found investigation to be a good aid in learning about the causes of serious incidents and for focusing attention on causal mechanisms – technological, human and organisational. The primary purpose of an investigation is to help ensure that similar incidents do not recur and to contribute to disseminating experience through the industry which can support learning processes in the companies.

We investigated or initiated the investigation of four incidents in 2012:

- Gas leak on Heimdal (May)
- Stability failure on Scarabeo 8 (September)
- Gas leak on Ula (September)
- Piping fracture at Mongstad (November).

The investigation reports are available on our website.

1.4.2 Player picture

The picture is characterised by Statoil as a big national player, a few large international players and some new and smaller participants. This diversity can represent opportunities for improving the level of safety, while presenting a challenge in itself. Many of the new operators and licensees are relatively small companies with limited capacity and expertise, and little or no experience of operations on the NCS. Most of these companies have so far pursued activities in the exploration phase, but some are now initiating work related to development and operation.

When following up the new operators during 2012, we paid particular attention to their first consent applications for exploration drilling and in connection with submitting PDOs.

The number of companies with operatorships on the NCS has increased considerably in recent years, rising from 14 in 2001 to 39 by 31 December 2012.

1.4.3 Acknowledgement of compliance (AoCs)

Nine AoCs were issued in 2012, the largest number in a single year since the system was introduced in 2000, and 51 mobile facilities had received such acknowledgements at 31 December.

In our view, the AoC system helps to create greater predictability for the industry, improves knowledge and understanding of the regulations, and enhances the sense of responsibility of mobile unit contractors. In certain cases, however, the resources we have devoted to considering applications are unnecessarily large because of deficiencies in the underlying documentation. This has resulted in lengthy communication with the applicant and thereby increased use of our time. Another consequence is that the contractors also incur costs.

However, we have seen a clear improvement – particularly during 2011 – in documentation from applicants who have been through this process on one or more occasions. Our reminders to the industry on the importance of good applications means first-time applicants are also submitting better-quality applications now than was the case in the early years of the AoC scheme.

An AoC is mandatory for the following units which are registered in a national register of shipping and are intended to conduct petroleum-related operations on the NCS:

- drilling rigs
- accommodation units (flotels)
- floating production, storage and offloading (FPSO) units
- well intervention vessels

An AoC has been a requirement since 2004 for mobile drilling facilities to conduct petroleum operations on the NCS. The extension came into force on 1 January 2007. However, it has been resolved that an AoC will not be given for FPSOs when these are operated by the operator company.

Acknowledgement of compliance (AoC)

An AoC is a statement from us that a mobile installation's technical condition as well as the applicant's organisation and management system are considered to comply with relevant requirements in Norway's offshore regulations.

More information about this arrangement can be found on our website.

1.5 Regulatory development

New regulations pursuant to the Working Environment Act.

Six new working environment regulations came into force at 1 January 2013 to replace 47 former regulations pursuant to the Working Environment Act. The purpose of the new regulations is to provide a better overview of rights and duties under the Act. While requirements were previously spread across the earlier regulations, provisions which regulate the same conditions have now been merged. That makes it easier to maintain an overall view. While the structure of the working environment regulations is new, the requirements are to all intents and purposes the same. However, the change requires a different approach to navigating through the regulations.

The revised working environment regulations also apply for petroleum operations offshore and at the land-based plants.

A number of the regulations abolished when the new system came into force also applied to the petroleum industry, either directly in their own right or by being made applicable through incorporation in the HSE regulations. Some have also been used as guidelines to the HSE regulations.

To ensure that the content of applicable legal provisions for the petroleum industry remains in place after the new regulations came into force on 1 January, certain delimitations and amplifications have been incorporated in the new working environment regulations and the HSE regulations. The requirements in the working environment regulations must be complied with as an integral part of the requirements in the overall HSE regulations for the petroleum industry.

Regulatory Forum

The Regulatory Forum is a body comprising government, company and union representatives for dealing with HSE regulation. We serve as the chair. Representatives from the Norwegian Climate and Pollution Agency (Klif) and the health authorities attend as and when required. Four meetings of the forum were held in 2012.

Based in part on comments received during the consultation on the recently adopted special HSE regulations for the petroleum industry, we have identified key issues through our dialogue with the industry in the Regulatory Forum for more detailed discussion. The following issues were considered during 2012:

- the need to clarify the "obligated party" structure,
- opportunities for merging more of the regulations,
- the meaning of the regulations and various terms related to responsibility.

We will produce an overall report from the review of these issues. However, we have made it clear that the final conclusions drawn from the discussions will be at the discretion of the government.

Standardisation work

The guidelines to the various regulatory requirements

provide recommended solutions in part by referring to industrial standards (recognised norms) as one way of complying with the regulations. If such a solution is chosen, the regulatory requirement is normally regarded as fulfilled. A company which chooses an alternative approach must document that this meets the regulation's requirements.

In order to obtain the best possible basis for determining which standards should be referenced in the guidelines, we participate as an observer in national, European and international standardisation efforts.

We again gave priority in 2012 to following up national and international standardisation work affecting the level of risk in the petroleum industry. That also included following up parts of the work being done in the wake of the Barents 2020 (phase 4) project in technical committee 67, sub-committee (SC) 08 on Arctic operations of the International Organisation for Standards (ISO). We have concentrated in this project on following up the working parties for emergency preparedness and for the working environment. We are monitoring work on emergency preparedness through an observer in SC 08. The working environment aspect is being pursued through participation in Norsok's "mirror" committee, which follows up and if necessary implements amendments in relevant Norsok standards.

Our follow up of international standardisation was somewhat reduced from the 2011 level. That reflected collaboration problems between the ISO and the American Petroleum Institute (API) over the ownership of the standards, and not least the US and European trade boycott of Iran. These conditions contributed to a halt in ISO standardisation work for a period, but the position normalised again during 2012.

We refer to about 200 recognised norms in the regulations, and about 30 of our specialist personnel participated in following up standardisation work in 2012 – either as observers or as commentators to assess whether a particular standard is suitable as a recognised norm.

2. NATIONAL AND INTERNATIONAL COOPERATION

2.1 Safety Forum

Established in 2001, the Safety Forum is the key tripartite collaboration arena between companies, unions and government for embedding strategic projects and processes related to safety in the petroleum activity. It accordingly serves as a consultative body in processes leading up to government White Papers affecting HSE in the industry. The forum is also an arena for embedding other processes and projects in the HSE area, such as the RNNP process, the noise project and follow-up of the Deepwater Horizon (DWH) disaster in 2010. At all times, the forum will have a strategic agenda which reflects the industry's main challenges in the HSE area.

We are responsible for administering the forum, which is chaired by our director general. Emphasis is given to ensuring that its activities are transparent and

well documented through detailed minutes and updated overviews of matters under consideration, which are posted to our website. The forum draws on our own discipline teams and on industry specialists for presenting issues as well as trends and development aspects. This contributes to mutual expertise enhancement and a common understanding of risk conditions in the industry.

The Safety Forum held five all-day meetings in 2012, one meeting to present the status revealed by the RNNP process, and the annual conference staged in June. A two-day company visit was also paid to Brussels, where the Safety Forum held meetings with key players in the European Commission and Norway's EU delegation. In addition, participants were called to dedicated meetings on special topics which required particular commitment and attention.

Follow-up of the DwH disaster

As in 2011, sharing information and experience in the wake of the DwH disaster set its stamp on 2012.

Information was exchanged at meetings of the Safety Forum, and status reports provided on the follow-up to this and other accidents in both national and international perspectives. We are also keeping the other forum participants continuously updated on trends and development aspects for serious incidents and specific information about individual events with a potential for major accidents and serious personal injuries. At the same time, companies, unions and government keep each other updated about on-going issues of fundamental significance until these have been resolved.

Annual conference

The Safety Forum's open annual conference for 2012 brought together just over 200 key players in the petroleum sector to debate major accident and working environment risk in the industry. The conference again attracted a full house, and this big interest confirms its significance as a key arena for the various sides of the industry to discuss issues related to major accident and working environment risk in this business. Expertise and capacity, increased activity in the far north, working environment risk and the position for rigs on the NCS were the main subjects of presentations and debates at the conference.

Noise and vibration

Noise is one of the major working environment challenges facing the industry, and has been a key issue at Safety Forum meetings up to the establishment of the industry's noise project. The forum has been continuously updated about developments in this important area, both by the project team and through our own supervisory activities. Getting the vessel owners involved in the project in a binding manner has been a challenge, and the subject of considerable debate at Safety Forum meetings. For our part, it has been important to challenge the industry to initiate and highlight good measures through the project.

Working time project

The petroleum survey on shift work, sleep and health (Pussh) being conducted by the National Institute for Occupational Health (Stami) has faced substantial challenges since its launch in 2009. It was based on our working time project and two international knowledge reviews, which contributed to a proposal by the oil industry to include shift work and health as a priority area where greater knowledge was required in the Petromax programme run by the Research Council of Norway.

Under the methodology adopted for the study, employees would be monitored over 10 years with surveys conducted annually for the first three years and thereafter biennially. The Research Council has so far given support for the first three years. Frequent investigations would make it possible to detect changes in working conditions, working time arrangements and risk factors over the period. The project can be linked to data from the Employment and Welfare Administration (NAV) to obtain information on outcomes, which are not confined to health. It has so far failed to meet its target with regard to scope.

A specialist group was appointed on behalf of the Safety Forum to help the project reach its goals with regard to scope and entrenchment in the industry. Neither the project nor the collaboration made the desired progress during 2012. The Safety Forum has sought to contribute in various ways to strengthening dialogue with the project, but the Stami management has also acknowledged the challenges of fulfilling the original ambitions.

Learning across industries and national frontiers

Experience transfer and learning across industries and national frontiers have been important considerations when the Safety Forum plans its annual company visits. It accordingly chose Brussels as the destination for this visit in 2012, where meetings were held with key players in the European Commission and Norway's EU delegation. The primary purpose of meeting representatives from the Commission's directorate-general for energy and the Norwegian delegation was to exchange information and views on issues related to safety in the oil and gas industry.

Consultation process in the wake of DwH

We have used the meetings of the Safety Forum to provide a response to companies and unions in the consultation processes on the key documents Principles for barrier management in the petroleum industry (the barrier document) and Action in the industry - follow-up of DwH (the action document). Our identical letter to the employer organisations was also reviewed and entrenched with the participants in the arena. The Norwegian Oil and Gas Association (then the Norwegian Oil Industry Association) also used the Safety Forum to present and go through its own report on experience from and action taken after the DwH accident.

Collaboration, roles and improvements

The Safety Forum's members, who are drawn from the big employer organisations and unions in the Norwegian petroleum industry, conducted an extensive debate in 2012 on experience sharing and further development of the arena. This aimed to identify views on how the forum is functioning as a tripartite arena, and how collaboration can be improved. Everybody contributed experience from collaboration and conflict management in this arena, and expressed views about communication and problem solving in light of roles and functions. The forum's role in relation to the government administration was also debated, along with the place of priorities and the significance of the international perspective for the business in issues under discussion.

Safety Forum priorities

The debate on what should be the Safety Forum's priorities from 2012 and beyond has been conducted with great involvement since it began in 2011. Underlying this discussion has been such issues as provisions in the Safety Forum's mandate, the working life White Paper and the petroleum White Paper, and a proposal on priorities which has been adjusted in line with the conclusions from the debate conducted at a number of meetings as well as specific proposals from the membership.

After extensive discussion, the five most important areas of the Safety Forum's strategic agenda were determined to be:

- major accident risk
 - working environment risk
 - collaboration between the various sides and worker participation
 - capacity, expertise and the significance of operating parameters for safety and the working environment
 - mutual sharing of knowledge and information.
- All these points have been amplified and are available on the Safety Forum's website at www.ptil.no.

Hydrocarbon leaks and well integrity – key issues

A number of debates were conducted in various fora between the government and the oil industry's interest organisations concerning the negative trend for hydrocarbon leaks identified by the RNNP process.

The industry got to grips with this trend and established a project in 2011 to reduce the number of such leaks. The Safety Forum has been kept continuously updated at natural milestones on progress in this area and about the various initiatives being pursued by the industry – such as a film on the consequences of leaks, and extensive seminar activity to ensure continuous follow-up of this important area by the industry.

Continuous updating

The various sides represented in the Safety Forum update each other on the progress of projects, processes

and individual issues of strategic significance for the development of the risk picture in the industry. Cases subject to continuous follow-up in 2012 included the following.

- *The petroleum investigation into shift work, sleep and health (Pussh)* is a research project on the working environment and health among petroleum industry workers both on land and offshore. It is a collaboration between the National Institute of Occupational Health, the University of Bergen and the International Research Institute of Stavanger.
- *Groups particularly exposed to risk* have been one of our four main priorities since 2007. Our main message has been that the companies must promote inclusion and reduce the risk of injury and illness for particularly exposed groups through specific measures.
- *Loss of anchors and position* is a project being pursued by the mooring forum of the Norwegian Shipowners Association (NR) to achieve a reduction in the number of serious mooring incidents. The NR has recognised here that it has lacked the desired commitment because of organisational challenges in the industry.
- *The RNNP*, where the Safety Forum is the reference body, reports on the status of key milestones set by the forum.
- *Tripartite collaboration, arenas and projects.* The working life White Paper identified tripartite collaboration as one of several priority areas. On that basis, the Safety Forum made provision for a broader debate and follow-up during 2012 covering such areas as collaboration, roles and improvement points in its own work.
- *Joint PSA/NAV/Norwegian Labour Inspection Authority project* on improving work customisation in the light of the inclusive workplace (IA) agreement is being followed up continuously in the Safety Forum.
- *The land-based plants* receive special attention from the Safety Forum, with experience from the L-8 HSE arena occupying a key place. A reorganisation of Statoil has also contributed to a re-evaluation of the role of and direction taken by L-8.
- *A new White Paper* was also followed up closely during 2012.
- *HSE and emergency preparedness in the far north* have been recurring subjects at the Safety Forum's meetings, and were also among several key topics at the forum's 2011 and 2012 annual conferences. A tripartite programme committee chaired by Norwegian Oil and Gas was established in 2012 to achieve the level of knowledge required greater understanding of challenges in the industry.

2.2 International

Cooperation with industrial countries consists first and foremost of the global collaboration in the IRF and the NSOAF. Both function well, and we regard this cooperation as a valuable contribution to the overall attainment of our goals. They are supplemented by bilateral collaboration at the specialist level with certain countries, particularly the UK, Russia, the Netherlands and Denmark.

2.2.1 International Regulators' Forum (IRF)

This body was established in 1994 to be a competent driving force for developing safety in the international petroleum activity through regulatory collaboration on joint projects and the exchange of knowledge and information. Current members of the IRF are the USA, Canada, Brazil, the UK, Australia, New Zealand, the Netherlands, Norway, Denmark and Mexico.

In addition to its annual member meetings, the IRF stages the International Regulators' Offshore Safety Conference every three years. The latest regular conference was held in Vancouver, Canada, in 2010. An extraordinary conference was also staged in Stavanger during 2011, with the Montara accident off Australia in 2009 and the DwH disaster in the Gulf of Mexico in 2010 on the agenda. The next international conference will take place in Perth, Australia, during October 2013.

On the basis of the conclusions from the conference held in Vancouver, Canada, during October 2011, the IRF resolved at its annual meeting to initiate measures in five main strategic areas where the member countries agreed to use their resources to promote safety in the international petroleum sector. In this connection, the various members have accepted particular responsibility for individual areas. We undertook to be responsible for performance indicators, heading a working party which will continue to develop selected indicators in the RNNP process with a view to establishing an international platform for systematising information on hydrocarbon leaks, well incidents, collisions, fires, fatal accidents and serious personal injuries. We have also accepted responsibility for evaluating opportunities to help speed up further development of blowout preventers (BOPs), well control systems and instrumentation.

Accidents in the petroleum industry appear to be attracting far greater international attention today than was the case earlier, and both we and the industry players in Norway must therefore be conscious of their responsibility to contribute. West Atlas (Montara) and DwH (Macondo) have given international collaboration on strengthening safety in the petroleum industry far great significance. It will accordingly be important for us to contribute actively to this work. We again committed substantial resources in 2012 to keeping abreast of follow-up activities in the wake of these two accidents, because gathering and exchanging information, sharing knowledge and professional updating between regulatory counterparts and their contacts with the industry

are considered to be crucial in helping to prevent major accidents.

2.2.2 International Committee on Regulatory Research and Development (ICRARD)

ICRARD was established by the IRF in 1994 as a global arena for sharing information and experience from HSE research in the petroleum sector. To help ensure that research activities are known and made available across continental shelf boundaries, we established the www.icrard.org website in 2004 on behalf of the forum. This site is regularly used by member countries to publish R&D-related news stories. It also has a unique search engine which looks only for information on selected websites in the member countries.

The site received almost 2 700 hits from 84 countries in 2012, and attracts roughly 150 unique visitors per month. During 2012, the IRF paid particular attention to R&D activities related to aging and producing-life extensions, carbon capture, transport and storage, and deepwater drilling.

2.2.3 North Sea Offshore Authorities Forum (NSOAF)

Safety regulators in the UK, the Netherlands, Germany, Denmark, Ireland, Sweden, the Faroes and Norway participate in the NSOAF.

Over the years, working groups appointed by the forum have conducted many projects aimed at identifying common challenges and adopting joint measures which can contribute to improving the level of HSE. Many challenges are of such a nature that they demand common action to achieve improvements. The industry is international, and many companies operate across continental shelf boundaries, which requires the regulatory authorities to act in the most coordinated possible manner. The regulators have limited resources, and exchanging experience, sharing information and collaborating permit more optimum use of these.

From time to time, the Norwegian regulations are alleged to set safety standards which drive up costs compared with offshore requirements in other countries. It is important in this context to have a good understanding of the way each offshore regulator enforces regulatory requirements. The NSOAF collaboration contributes to this.

A substantial proportion of the NSOAF's work is conducted through the working groups appointed by its annual meeting. The latter receives reports from the various working groups and decides on the work programme for the coming period, including the possible winding up or creation of new working groups. Four such groups were in operation during 2012, covering HSE management in general, safety training, drilling and wells, and the exchange of information concerning the relationship of member countries to the EU. The NSOAF has also been extensively consulted by the European Commission on safety issues.

As part of the follow-up on the background to

the Macondo accident, collaboration was pursued in 2012 over the planning and execution of an audit series in the NSOAF countries focused on the subject of organisational and human factors related to well control. All the member countries have conducted audits of selected players and shared their experience with the others. The overall experience will be published as a joint report.

The NSOAF's members cooperate with the EDTC and the OMHEC.

2.2.4 European Diving Technology Committee (EDTC)

Some 20 European countries belong to the EDTC, and each member state can appoint one civil service, union, industry and medical representative. Norway has appointed a representative from each of these four categories, with the authorities represented by us. The EDTC's principal activity is work on joint documents which are posted to its website. Although its scope is confined to Europe, documents produced by the committee are also used as references in other parts of the world. One example is the document on diver expertise, which has been produced and issued together with the International Marine Contractors' Association (Imca).

During 2012, we raised issues related in particular to the education of bell divers and the use of intensive three-week courses to provide divers with expertise in line with the EDTC's competence standards. We are concerned that such courses fail to confer the necessary expertise and experience for engaging in diving operations in the North Sea. As a result, we have urged the members of the EDTC to establish a group to assess experience with such courses and possible requirements for amending the training.

2.2.5 Offshore Mechanical Handling Equipment Committee (OMHEC)

The OMHEC brings together specialists on crane and lifting operations, and holds two meetings a year. Personnel from Denmark, the Netherlands, the UK and Norway participate in the committee's work, and each nation can appoint up to four representatives. Its principal activity is work on joint documents, such as common recommendations on issues related to cranes and lifting. These include recommendations on expertise requirements for personnel and competent persons, and on educational standards.

2.2.6 Bilateral collaboration with Russia

Our collaboration with the Russian authorities represents an extension of the former Boris project, and is supported by the Ministry of Foreign Affairs. With the clarification of the boundary line in the Barents Sea and growing activity in these waters, maintaining contact with the Russian government on petroleum industry safety continues to be important for us.

Our Russian partner is Rostekhnadzor, the regulator responsible for technical safety in the petroleum sector. Official responsibility for HSE in Russia is other-

wise spread over various government agencies we are not in contact with. However, we are in touch with the Norwegian embassy and players familiar with Russia's petroleum sector.

We held a meeting with Rostekhnadzor in 2012. The agenda covered the status of work on developing regulations for the Norwegian and Russian petroleum industries, responsibility for mobile facilities, follow-up of the Barents2020 project, and research and technology development related to petroleum activities in the far north/Barents Sea.

Russia has initiated a review of its whole legislative framework, including safety legislation, for the petroleum industry. In that context, Rostekhnadzor observed that Norwegian experience and principles provide it with a good basis when conducting this assessment.

It emerged from the meeting that Rostekhnadzor has no role in approving or checking safety on mobile facilities. This responsibility is spread between various Russian government agencies, and we will work to establish contact with these. We see that this can become an important issue to the extent that drilling rig moves between the NCS and the Russian continental shelf become relevant.

Russia has undertaken the role of chairing the continuation of Barents2020 work in SC 08 of ISO technical committee 67. We also participate in this work.

During the meeting, we also referred to the Norwegian-Russian project being run by Intsok on challenges in the far north and the technology available to overcome these. We will follow up this subject in our future meetings.

We also participate in the marine environment group under the Norwegian-Russian environmental commission. We took part in a meeting with the Russian authorities in 2012, where our focus was on methods for risk assessment in order to manage risk and help to prevent accidents and discharges.

2.2.7 Development cooperation

The Norwegian government established its Oil for Development (OfU) project in 2005. Within this assistance programme, we help developing countries to establish an administration which can handle risk in the oil and gas sector. Operational responsibility rests with the Norwegian Agency for Development Cooperation (Norad), which seeks technical support in this work for a number of specialist agencies. Safety forms part of most OfU programmes. We contribute to a number of these, primarily together with the Norwegian Petroleum Directorate (NPD), Klif and the Petrad foundation.

Cuba

We collaborated with Petrad to assist Cuba's safety regulators for the petroleum industry. Several week-long seminars were conducted on various safety-related issues. Subjects included lessons from the DwH accident and safety challenges for deepwater exploration drill-

ing in the Cuban part of the Florida Straits. The lack of regional collaboration has been an additional challenge.

Ghana

Together with the NPD and Petrad, we provided assistance on HSE related to organisational and regulatory development as well as more operational aspects of the petroleum industry. This has been an OfU programme since 2007. Extensive exploration drilling is being pursued offshore. Substantial discoveries have been made in these waters, and a large field is now in full production. Major safety and emergency preparedness challenges exist. The OfU project runs to 2014.

Tanzania

Large gas discoveries have been made in Tanzania, and the population has a big need for clean energy. We are contributing to the development of an official administrative structure to handle the safety challenges of exploration drilling and production in deep water. No safety regulator currently sets requirements for the technical condition of facilities or how activities are to be organised and implemented. Assistance is also needed with problems related to corrosion and maintenance on producing fields. A four-year programme has been established. We collaborate with such partners as state oil company TPDC and the OSHA labour inspection authority on safety challenges.

Uganda

We are contributing to organisational, regulatory and expertise development for strengthening HSE work in Uganda's petroleum sector. The process of adopting a new Petroleum Act, which also involves establishing new institutions for organising the industry, has been politically difficult and has extended over many years.

Organisation of safety and the working environment is two-pronged, in that the Ministry of Labour is responsible for the working environment on the Norwegian pattern, while the PEPD – Uganda's equivalent of the NPD – has been allocated responsibility for safety. Under the new Act passed by parliament in December, a new regulator will have overall responsibility, reporting both to the Ministry of Labour and the Ministry of Petroleum and Energy.

Several delegations from Uganda visited us in 2012. We have also participated in a Ugandan seminar on regulations.

Because of an extensive corruption case, development cooperation was temporarily suspended in late 2012.

Vietnam

We have pursued assistance work in Vietnam since 1996 together with such partners as PetroVietnam and Klif. This project has contributed to developing an HSE management system for the country's petroleum sector. It terminated in 2012. All the project phases were subjected to an external evaluation. This proved very positive, and was presented under the title Exemplary

oil administration project in Vietnam.

Sudan

We have established and implemented two seven-week technical courses on drilling and well, production, the environment and safety – provided by the Stavanger Offshore Technical College (Sots) – for two groups of staff from the regulator under the Ministry of Petroleum in Sudan. In addition, a formal audit by the regulator has been carried out on an operator in Khartoum and in the field on production facilities and rigs in south-west Sudan, with Klif, Sots and ourselves acting as advisers. This resulted in an audit report which was communicated and formally conveyed to the operator by the regulator. Plans call for practical training of a number of the course participants to continue in early 2013.

São Tomé and Príncipe

This country is in a phase where blocks are being advertised and exploration licences awarded. It has established a directorate on the Norwegian pattern. This has received wide powers and responsibility for following up the industry in terms of both resource and safety management.

We received two visits from São Tomé and Príncipe during 2012. In addition, we took part in a workshop in São Tomé on organisational development and in an activity related to annual planning of the programme, together with general follow-up activities.

Nicaragua

Nicaragua also faces major challenges related to drilling in ultra-deep waters. We have contributed here together with the NPD. Promising projects exist on the Caribbean side, where fully interpreted seismic data are available.

Other assistance work

We also gave a number of speeches to delegations from nations worldwide under the OfU programme in order to inform them about the Norwegian management model and safety regime for the petroleum sector.

3. PUBLIC AFFAIRS AND COMMUNICATION

3.1 Our information policy

Information supplied to the industry, the media and the public at large will be characterised by openness, accessibility and accuracy. Given the special position occupied by the oil and gas industry in Norwegian society, we will provide information about its activities and answer questions to the extent that this is possible and acceptable given our role as a regulatory authority and our overall objectives.

3.2 Media management

All media enquiries are handled in accordance with the principles of our public affairs policy as specified above. In addition to direct contact with the media, we use our

In addition to direct contact with the media, we use our website to provide information about our follow-up of such matters as undesirable incidents. As a general principle, we publish specially-written articles only about our own activities – the launch of our own investigations, the submission of inquiry reports and so forth.

3.3 The internet

The www.psa.no website is one of our most important channels for spreading information about who we are and what we do. Press releases, technical articles and interpretations of regulations are posted regularly to the site, which also hosts a dedicated section for the Safety Forum (www.psa.no/safetyforum).

In addition, information on all our supervisory activities is presented on the site in the form of articles. We do this both to make our work and priorities visible, and to make it easier for the companies and the industry to use the information for education and experience transfer. The bulk of the material is published in both Norwegian and English.

Publication of supervisory activities on the web in English includes:

- investigation reports
- summaries of our audit reports
- notices of orders and orders
- consents
- acknowledgements of compliance (AoCs)
- identical letters to the industry (related to audits).

Apart from complete audit reports, all material is posted in both Norwegian and English.

All relevant statutes and HSE regulations for the Norwegian petroleum sector, with associated guidelines and interpretations, are available at www.psa.no/regulations.

Our site has become one the most-used sources of safety-related information for the NCS, with roughly 40 000 hits and more than 20 000 unique visitors every month. We also offer a subscription service for news, supervisory information and interpretation of regulations, and had some 6 200 subscribers at 31 December 2012.

We make active use of our website to highlight our role, priorities, activities, audit results and so forth. In our view, the openness signalled through such publication, and the volume of information which is thereby made available to the world at large, represent a substantial contribution to understanding risk conditions and challenges in the business.

Public interest in our activities is reflected in part through the number of requests for access to documents, which rose sharply over a number of years but now seems to have flattened out. We responded to 4 151 such requests in 2012, compared with 4 299 the year before. Of the 2012 applications, 204 were denied or approved with restricted access.

3.4 Electronic communication

3.4.1 License2Share (L2S)

L2S is a shared solution for processes related to the administration of production licences and official correspondence between the petroleum industry and the government on the NCS.

This solution is managed by the Exploration & Production Information Management Association (Epim). We follow up selected licences and serve as an observer on the committees.

3.4.2 Official correspondence – Authorities

Authorities provides a secure two-way web-based communication channel for exchange of formal electronic correspondence between the operators/licensees and the government within L2S. It has been provided with a high level of security, so that only sender and recipient can read the content. This solution offers full traceability of all documents exchanged.

No less than 47 companies currently use Authorities, compared with nine in 2011. We are very satisfied that so many companies have chosen to adopt this tool for electronic communication. This development contributes to reaching our goal of full electronic interaction with the licensees in the petroleum industry.

3.5 Courses and speeches

To contribute to knowledge transfer in the HSE area and to provide information on our regulatory role, activities and priorities, we consider it important to participate with papers and presentations in key strategic arenas such as conferences, courses and so forth.

We also stage our own courses and seminars to focus attention on areas which represent safety challenges.

The following open conferences and seminars were organised by us in 2012.

- *When accidents threaten the environment* – on major accident risk in an environmental perspective. In collaboration with Klif.
- *Now hear this* – concerning noise and hearing damage in the petroleum sector. In collaboration with the industry's noise project.
- *Wear and tear on subsea wellheads* – on learning, sharing of experience and prevention of major accidents as a consequence of wear damage to subsea wellheads.
- *Annual Safety Forum conference* – on current trends. Covered such topics as major accident risk, challenges posed by petroleum operations

WEB WORDS:

Hits

Hits on our website represent the number of times some body has searched our web pages and found what they were looking for.

Unique visitors

This expresses the number of people who have visited our website from individual PCs (IP addresses).

However, many individuals or PCs may be behind each such address, depending on the IT solution chosen for the user location.

in the far north, and challenges related to expertise and knowledge, the chemical working environment and renewal of the rig fleet on the NCS.

- *Aging and producing life extension* – on regulatory development, experience, and research and development related to aging of installations and pipelines.

We also held our increasingly traditional Safety Lunch at the biennial ONS conference in 2012. The subject this time was paradoxes and dilemmas related to safety and costs.

Many of our managers, technical experts and other key personnel are in constant demand to speak at courses and conferences, and to chair and participate in a number of committees for such programmes nationally and internationally.

4. ORGANISATION

4.1 Staffing

We had 162 employees in service at 31 December 2012. Women make up 46 per cent of the staff, and men 54 per cent. The proportion of women in senior posts is 35 per cent, and we are constantly working to achieve an even balance between the genders in all job categories.

The average age of the workforce is 54 years for men and 47 for women.

Sickness absence in 2012 was 3.6 per cent, compared with 3.4 per cent the year before.

Twelve employees resigned in 2012 and 12 new appointments were made to permanent positions. In addition, seven canteen staff left because operation of the canteen was outsourced in 2012.

4.2 Senior management

comprises our director-general, Magne Ognedal, and five area directors. Our press spokesperson is affiliated with the senior management team. The communication and public affairs function reports directly to senior management.

4.3 Supervision

Six supervision teams monitor sectors or groups of players in the industry. Contact persons have been designated in each team to provide a fixed point of contact for the various players. Each team is headed by a supervision coordinator with product responsibility and formal decision-making authority.

The responsible managers are Ingvill Hagesæther Foss and Finn Carlsen, as the directors of supervisory activities.

4.4 Professional competence

Our professional competence is divided into six discipline areas, each with its own leader responsible for human resources and for expertise development in their area. These areas were:

- drilling and well technology
- process integrity
- structural integrity
- logistics and emergency preparedness
- occupational health and safety
- HSE management

The discipline areas allocate human resources to supervisory activities and multidisciplinary projects.

Øyvind Tuntland, the director for professional competence, is the responsible manager.

4.5 Legal and regulatory affairs

The regulatory development activity embraces:

- development of regulations and standardisation
- cooperation with government authorities in other countries and the responsible Norwegian ministry over regulatory development
- internal coordination and preparation of reviews, studies and reports for the ministry
- incorporating and interpreting European regulations under the European Economic Area agreement
- development of collaboration and coordination agreements
- managing public consultation processes relating to regulatory development.

The responsible manager is Anne Vatten, director of legal and regulatory affairs.

4.6 Operational support and development

is responsible for our in-house operation. It also provides support for developing our own organisation and follows up our sub-contractors.

The activity embraces:

- human resources
- organisational development
- company occupational health service
- finance and contract management
- internal security and reception
- building coordination
- intranet and web information system
- library
- document centre
- system development/electronic processing
- canteen
- operation of shared services for the NPD and Petrad.

The responsible manager is Gerd Randi Kaland, director for operational support.

5. KEY FINANCIAL FIGURES

The Storting determines both expense and income appropriations for the PSA as part of the central government budget. As a government agency, the PSA submits its accounts to the Ministry of Finance in accordance with the cash accounting principle.

Expenses

Operation of the PSA cost NOK 215.7 million in 2012. The table shows how this breaks down between the main items. Corresponding figures for 2011 are shown for comparative purposes (all figures in NOK).

	2012	2011	Change in NOK	Change
Pay and benefits	133 451 964	126 683 879	6 768 085	5.3%
Goods and services	64 612 746	63 118 751	1 493 995	2.4%
Total operating expenses	198 064 710	189 802 630	8 262 080	4.4%
Contract-related pay and benefits	2 090 477	1 728 815	361 662	20.9%
Supervising the petroleum activity	14 786 311	23 386 826	8 600 515	36.8%
Total special operating expenses	16 876 788	25 115 641	8 238 853	32.8%
Major equipment purchases	787 785	1 023 510	235 725	23.0%
TOTAL EXPENSES	215 729 283	215 941 781	212 498	0.1%

Income

The PSA had an income of NOK 79.6 million in 2012, which breaks down as follows:

	2012	2011	Change in NOK	Change
Contract and collaboration income	2 624 570	2 746 425	121 855	4.4%
Refunded supervisory expenses	74 824 384	90 071 922	15 247 538	16.9%
Miscellaneous income	467 177	1 907 942	1 440 765	75.5%
Conference/seminars	38 207	36 600	1 607	4.4%
Refunded labour market measures	-	4 080	4 080	100.0%
Refunded maternity/adoption pay	1325 684	906 200	580 516	64.1%
Refunded trainees	34 533	52 178	17 645	33.8%
Refunded sick pay	1 252 989	1 532 260	279 271	18.2%
TOTAL INCOME	76 999 444	97 257 607	17 690 063	18.2%