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PETROLEUM SAFETY AUTHORITY
NORWAY

Who is actually **responsible** for safety on the NCS? What is the **job** of the oil companies? What is the **PSA**? What is **supervision**? What **rights** and **duties** do employees have? How are the **regulations** developed?

The Norwegian model for managing safety in the petroleum sector may seem complicated.

With this publication, we have sought to produce an educational guide to the safety regime. Our aim is to contribute to understanding and knowledge among those who work in the industry, and among everyone with an interest in it.

PETROLEUM SAFETY AUTHORITY NORWAY

Abbreviations used in this publication

AoC: Acknowledgement of compliance

HSE: Health, safety and the environment

NCS: Norwegian continental shelf

PSA: Petroleum Safety Authority Norway

RNNP: Trends in risk level in the petroleum activity

UNDERSTANDING THE NORWEGIAN REGIME

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WHO CAN PURSUE PETROLEUM ACTIVITIES?

All companies wanting to pursue petroleum operations on the NCS must qualify as a licensee or an operator. They must demonstrate the ability to help boost offshore value creation and the HSE expertise required to strengthen safety.

What is a licensee?

A licensee is a company holding an interest in a production licence issued under the Norwegian Petroleum Act. Each licence usually has several licensees, with one appointed as operator.

All licensees undertake to contribute actively to the licence, in part by monitoring that the operator has activities under good control.

What is an operator?

The operator is the licensee who handles day-to-day management of activity in a production licence on behalf of the whole partnership.

It has overall responsibility for acting in a prudent manner and pursuant to the regulations, and for seeing to it that everyone working for it complies with the HSE requirements.

What is a contractor?

Contractors provide services in various areas, such as drilling, well service and maintenance. They are responsible for safety in their own operations, and undertake to have a management system which allows them to take care of HSE in their area of responsibility.

How are licences awarded?

Production licences are issued in regular licensing rounds and in the annual awards in predefined areas (APA). Companies receiving them must have geological understanding, technical knowledge, financial strength and HSE expertise.

Awards are made by the Ministry of Petroleum and Energy, drawing on advice from such sources as the PSA.

WHO IS RESPONSIBLE FOR SAFETY?

Each company is responsible for the safety of its own activities. This is a fundamental principle of Norway's petroleum regulations, because the necessary detailed knowledge and decision-making authority – and not least the resources to ensure compliance with the regulations – lie with the individual player.

Companies awarded production licences on the NCS are carefully vetted in advance, not least for their expertise, capacity and willingness to accept accountability.

Both the regulations and their enforcement are therefore organised to underpin the way this liability is experienced by the players.

What is the “see to it” duty?

This Norwegian legal concept means the operator has a special obligation to ensure that the activity as a whole is conducted in a prudent manner and pursuant to the regulations.

That includes seeing to it that everyone working for the operator complies with official HSE requirements.

This duty is a general overall responsibility to supervise, which supplements the obligation resting on all companies to comply with the regulations.

How this requirement is to be met must be specified in the operator's management system.

What must the licensees do?

The see to it duty also applies to the licensees, who must facilitate the operator's ability to do its work and monitor that the latter is fulfilling the regulatory requirements.

A licensee has a responsibility to act if it identifies conditions which fail to accord with the regulations.

WHAT IS THE PSA?

The PSA is a government regulator with official responsibility for supervising technical and operational safety, emergency preparedness and the working environment in the petroleum sector.

Reporting to the Ministry of Labour and Social Affairs (whose name has varied over the years), the PSA has been delegated the authority to issue detailed regulations covering safety and the working environment in the industry.

It is authorised to take administrative decisions in the form of consents, orders, coercive fines, shutting down operations, prohibitions, exemptions and so forth.

The PSA is also a directorate. In Norway's system of government administration, these bodies develop, manage and communicate knowledge about their area of responsibility.

This role involves providing advice to its superior ministry and serving as a source of expertise for its sector, other government agencies and the general public.

What does its responsibility include?

The PSA's supervisory responsibility embraces oil and gas activities on the whole NCS, eight facilities on land, and associated pipeline systems.

It covers operators, licensees, contractors and vessel owners, and the whole petroleum-industry life cycle from exploration drilling, development and operation to cessation and removal.

Why is the PSA both *guidedog* and *watchdog*?

The *guidedog* role relates to the PSA's continuous follow-up of the industry. This interaction allows it to share knowledge and experience, and thereby contribute to management and risk reduction. The requirement for continuous improvement is a cornerstone here.

As a *watchdog*, the PSA supervises that the companies operate prudently at all times and can use its enforcement powers (such as orders) if they fail to do so.

WHAT ARE THE GOVERNMENT'S RESPONSIBILITIES?

The PSA is responsible for establishing parameters for the petroleum industry and for following up that the sector acts in a prudent manner.

This involves developing regulations, checking that the companies comply with these, and taking appropriate enforcement action (such as issuing orders) if the rules are broken.

The government must ensure that an integrated approach is taken to regulating the industry, and that regulatory revisions keep pace with general developments in the sector.

In addition, the PSA is responsible for assessing whether the standards referenced in the regulations are suitable for their purpose.

Experience transfer and enhancing accountability among players are important goals for the overall follow-up of safety and the working environment in the petroleum sector, and the PSA puts great emphasis on communicating knowledge about risk.

What are the limits of government responsibility?

A fundamental principle is that the government *cannot inspect safety into the industry*. The latter bears sole responsibility for acting prudently, in compliance with the regulations.

A crystal-clear division of responsibility is applied in Norway's petroleum sector – whoever owns the risk also owns the duty to deal with it.

It is neither possible nor desirable for the authorities to manage the industry in detail. One consequence of attempting to do that would be to undermine how companies experience their responsibility.

WHAT ARE THE EMPLOYEE'S RESPONSIBILITIES?

Employees play an important role in safety work – one which both confers rights and imposes duties.

The companies must make provision for genuine worker participation, and ensure that statutory bodies such as the working environment committee and the safety delegate service are used in a good and constructive manner.

What is the aim of worker participation?

Worker participation is a regulatory requirement in Norway, on the grounds that those exposed to risk must be involved in decisions related to HSE.

Such involvement is partly intended to draw on the overall knowledge and experience of personnel to ensure that matters have been adequately assessed before HSE-related decisions are taken.

Elected safety delegates and employee members of a company's working environment committee have a particular responsibility in this respect.

Why is worker participation important?

Norway's petroleum industry regulations are largely performance-based (functional). They specify what *level* of safety is to be achieved, but not *how* to do so.

The companies have great freedom to decide how to meet the regulatory requirements, which means that many solutions are adopted at local level. This underlines the importance of ensuring that everyone involved has a chance to be heard.

How does participation help to strengthen safety?

Where companies have a constructive climate and genuine worker participation, this collaboration can be seen to contribute positively to work on HSE.

Employees help to provide management with a good basis for making difficult choices. Once decisions have been taken, too, implementing them will be quicker.



WHAT DOES TRUST MEAN FOR SAFETY?

Trust between companies, employees and government is not only a matter of creating a constructive climate for collaboration, but also fundamental to the Norwegian model of government regulation.

Should this mutual confidence decline, the basis for the present system would be significantly weakened – leading to more detailed regulation and an approach characterised by greater inspection and control.

Such trust does not just happen. It is built up gradually through dialogue and collaboration. A new company on the NCS may seem a solid player, but still needs time to build trust.

Why is openness so important?

Openness is an important factor in creating trust. Norwegian society has long traditions in this respect, particularly for public administration.

Put briefly, Norway's Freedom of Information (Fol) Act states that all correspondence, administrative procedures and the like are publicly available unless specific conditions dictate otherwise.

The PSA receives several thousand Fol applications every year, and only about three per cent are fully or partly refused with reference to exceptions in the Act.

However, companies must feel secure that *sensitive* information will not go astray. The PSA accordingly makes a careful assessment of each application to decide whether it can be granted.

WHAT IS SUPERVISION?

Even if a company is trusted and has received the required consent for its operation, the way it discharges its obligations must be monitored.

Supervision expresses the totality of contacts between the PSA and those supervised. It covers all activities which provide the basis for assessing whether the companies are fulfilling their responsibility to operate prudently.

In other words, supervision embraces more than the audits and verifications which take place offshore and at the land-based plants.

How is supervision conducted?

Notice of a supervisory activity, such as an audit, is usually given some time in advance. The audit normally begins well before the team goes into the field, generally through meetings with the relevant company.

Both management and employees are represented at these sessions, and the PSA usually holds separate meetings with the safety delegate service during visits offshore or to land plants. This is to ensure that employee views find clear expression.

A supervisory activity is summed up in a report which forms the basis for deciding how possible nonconformities, improvement points and other findings are to be followed up.

It could be relevant, for instance, to issue an order. This is an administrative decision which the company is legally bound to comply with.

What does the PSA supervise?

Supervision by the PSA is risk-based. This means that audits or verifications are planned in terms of an overall assessment of where the *risk* is highest.

In other words, they are not based on specific intervals or a principle of regular visits. Virtually all audits/verifications are conducted through random sampling rather than trying to cover all aspects of a facility.

Where can PSA reports be found?

All audit reports, investigation reports, notifications of orders, orders, identical letters, consents and AoCs are published on the PSA website at psa.no. Some are also available in English translation.

WHAT HAPPENS WHEN THE REGULATIONS ARE BREACHED?

If the PSA comes across nonconformities or breaches of the regulations, it always asks the company concerned to explain how these will be dealt with.

A response can be provided in the form of written documentation, sometimes supplemented by meetings between the PSA and the relevant company.

What happens with serious violations?

When the PSA identifies gross breaches of the regulations, it can make a formal response – such as issuing an order. This is a powerful, legally binding instrument used in connection with serious non-conformities.

Before an order is issued, the PSA usually sends the company a *notice of order*. In some cases, the order is imposed immediately.

What other reactions are available?

In more acute circumstances – like a hazard or accident which poses a safety threat – the PSA has the authority to use even stronger reactions, such as halting an activity immediately.

It can also impose coercive fines in order, for example, to ensure compliance with an order. Administrative fines can be levied in response to serious and repeated violations of the working environment regulations.



HOW DOES THE PSA DEAL WITH SERIOUS INCIDENTS?

Undesirable incidents must be reported to the PSA. Some 600-800 such notifications are received every year. The PSA's emergency phone line is staffed around the clock.

In addition to recording the incident, the duty officer taking the call will assess its seriousness and the level of PSA follow-up required.

If necessary, they will mobilise the authority's own emergency response organisation so that it can monitor a serious event from the PSA's emergency centre as it unfolds.

Which incidents are investigated?

A serious event could prompt the PSA to launch a formal investigation. This decision will be taken after the acute incident has been clarified.

Several considerations may persuade the PSA to launch a formal investigation. The seriousness of the incident is the most important, but other factors can also be decisive.

Examples of incidents investigated by the PSA:

- major accidents or near misses
- deaths resulting from a work accident
- serious personal injury with a potential for deaths
- serious weakening or loss of safety functions and barriers, which threatens the facility's integrity.

What is the goal of PSA investigations?

Learning lessons and transferring experience to the industry are the main motives for the PSA as a regulator when conducting an inquiry.

Its investigations aim first and foremost to clarify the course of events and the underlying causes, so that both industry and regulator can learn from them.

These examinations are an important instrument for learning what unleashes serious incidents, and play an important part in supervising the industry.

Uncovering possible criminal actions is not a goal. That is for the police. If the latter investigates an incident, however, the PSA will usually be asked to provide technical assistance.

HOW ARE THE REGULATIONS STRUCTURED?

Oil and gas operations in Norway are subject to a number of legal enactments, with the Petroleum Act providing the framework for the overall safety requirements.

Furthermore, the Working Environment Act authorises overall requirements for this area. In addition come statutes on pollution control, fire and explosion, and a number of health-related Acts.

What are the most important regulations?

The HSE regulations contain the key regulatory provisions for this area in the petroleum sector. The framework regulations specify basic safety requirements for organising and executing the industry's activities.

Additional provisions appear in the management, activities, facilities, and technical and operational regulations, as well as in six general sets of rules covering the working environment.

Guidelines explain how a specific regulation can be met. Regulations and guidelines must be viewed together to gain the best possible understanding of how to satisfy requirements.

How are standards used?

In certain areas, the guidelines provide recommended solutions – such as industry standards – which will meet the regulatory requirements.

Choosing a recommended solution is considered to fulfil the requirement. Those who opt for an alternative approach must show that it satisfies the regulations at least as well or better.

Where can you find the regulations?

The regulations governing petroleum operations are only available on the PSA's website at psa.no.

WHAT CHARACTERISES THE REGULATIONS?

Norway's petroleum regulations are largely based on performance (functional) requirements, which specify *which* level of safety must be met but not how this is to be done.

That gives the companies great freedom to decide on their route to fulfilling the regulatory demands.

What are the benefits of a performance approach?

An important reason for this approach is to avoid technical advances *outstripping* the regulatory framework and creating a need for constant revisions to keep pace with new solutions.

At the same time, the functional requirements emphasise that planning and executing operations in order to meet the safety targets are a matter for the companies.

What are guidelines?

Guidelines are provided to avoid misunderstandings about what it takes to fulfil the regulations, and often refer to recognised Norwegian and international industry standards.

The latter deal with structures, equipment, procedures and the like, and a regulatory requirement is considered to be fulfilled when a recommended solution of this kind has been adopted.

However, it is fully possible to choose an alternative approach providing the company can show that the requirement has been met as well as or better than with the standard.

WHY ARE THE REGULATIONS PERFORMANCE-BASED?

In the early years of Norway's petroleum industry, the regulatory regime was based on specific requirements, checks, inspections and detailed orders.

That represented a marked contrast to today's system, which is characterised by performance management, a systems orientation and dialogue between the government and the companies.

Why the detailed regulations?

Making it clear what the government expected of the companies was important during the early years, when the industry was new and unfamiliar.

One consequence was that supervision often focused on details and components, usually followed by specific orders to the companies about what had to be improved.

Why the shift to a performance basis?

This initial system had big weaknesses. From a supervisory perspective, for example, the companies only had to correct the faults discovered by the regulator without addressing the underlying causes of non-conformities or problems.

The industry also found that the detailed requirements restricted opportunities for innovation and technology development.

But the greatest source of concern from the government's viewpoint was that detailed regulation did not help the companies to grasp their own overall responsibility. Nor was the climate of collaboration between regulator and companies good.

The transition from the original reliance on detailed control to the present framework-based approach was gradual. But the regulations were eventually reshaped to express *which* requirements must be met by the companies rather than specifying *how* this is to be done.

HOW ARE THE REGULATIONS DEVELOPED?

Amendments are being made to Norway's HSE regulations for its petroleum sector all the time. The industry constantly comes up with new ways of pursuing its operations, which means the government must keep pace and ensure that the regulations are adapted to the innovative solutions.

Annual updates to the regulations ensure that they are tailored at all times to the challenges currently facing the industry.

What is the Regulatory Forum?

The regulations are developed in close partnership with companies and unions, and the Regulatory Forum provides a key arena for this work.

Representatives of employers, employees and government meet under this banner several times a year, and amendments to the regulations are often initiated there.

Who is responsible for the standards?

Primary responsibility for developing and managing the industry standards often referenced in the performance-based regulations rests with the petroleum sector itself.

The robustness of these norms depends on the companies joining forces to come up with the best solutions. That saves resources while making the industry's responsibility clear.

This work is closely monitored by the PSA, which has observers on a number of standardisation committees. In addition, it assesses the suitability of a standard in relation to the level of safety desired.



WHAT IS TRIPARTITE COLLABORATION?

Cooperation between employers, unions and government has long traditions in Norwegian working life, where these parties join forces in a constructive collaboration on improvements – including for safety and the working environment.

This tripartite collaboration represents an asset which both sides of the industry want to preserve. The PSA is also very keen on this form of interaction, and devotes great resources to it.

What are the key tripartite arenas?

Several arenas have been established for such tripartite collaboration in the petroleum sector. Two of the most central are the Regulatory and Safety Fora.

The Regulatory Forum is an arena for information sharing, discussion and feedback aimed at developing and maintaining framework documents for the petroleum sector.

Practical implementation and use of the regulations are discussed, and the members exchange views on the content of new and revised rules as well as on their experience of using them.

The Safety Forum facilitates and encourages collaboration and debate on key HSE challenges in the petroleum sector, both offshore and on land.

Chaired by the PSA's director general, it comprises HSE personnel, executives and key decision-makers among the parties in the industry. The Ministry of Labour and Social Affairs is an observer.

HOW CAN RISK BE MANAGED?

All human activity involves risk. Risk management is about assessing, prioritising and allocating resources to the areas where the best safety gains can be achieved.

Identifying, understanding and managing risk is crucial to the work of preventing accidents in the oil and gas sector.

What must the companies do?

Norway's regulations require companies to analyse their own activities in order to identify how hazardous conditions might arise and develop, and the possible consequences of the various scenarios.

On the basis of these analyses, barriers must be established and performance criteria set for these.

Risk analyses must be updated and further developed during the operating phase, and adapted continuously to change. Barriers must be monitored, measured and followed up to ensure that they maintain their function at all times.

What is major accident risk?

Preventing a major accident is the most vital of all the PSA's important regulatory duties. Such an event is defined as an acute incident – like a major emission/discharge, a fire or an explosion – which immediately or subsequently causes the loss of several lives and/or serious personal injuries, serious harm to the environment and/or the loss of substantial material assets.

Who is most exposed to risk?

Groups particularly exposed to risk is the term for *occupational categories* in the petroleum sector which are especially vulnerable to injury or illness at work.

It is very important that companies pay special attention to these groups. Illness and injury are costly not only for the people affected but also for their employers and for society as a whole.

WHAT IS KNOWN ABOUT THE LEVEL OF RISK?

Trends in risk level in the petroleum activity (RNNP) is an annual survey led by the PSA. Starting in 1999-2000, it monitors major accident, working environment and acute oil spill risks.

The RNNP helps to ensure that all sides of the industry have a common understanding of developments in risk level. It also provides the PSA with an important basis for planning supervisory activities and developing the regulations.

Two complementary methods are used in the survey:

- by describing critical indicators – defined situations of hazards and accidents (DSHA) – for safety and the working environment, a set of measurement tools has been developed to say something about trends in risk level on the NCS
- in addition, questionnaire-based surveys, interviews, field work and other studies form the basis for sociological analyses.

What do the RNNP figures say about major accident risk?

Major accident risk is difficult to measure directly. Many underlying indicators are therefore used to identify the industry's success in managing the factors which affect it.

Viewed over a number of years, the major accident indicator gives a clear picture of how the risk is changing. Big annual variations may occur, but the long-term trend is what matters most.

Where can you read the RNNP reports?

Survey results are presented in annual reports. While the bulk of the RNNP covering major accident and working environment risk is normally published in April, the section dealing with the risk of acute discharges usually appears in the autumn.

All the RNNP reports are published and presented on the PSA website at psa.no

WHAT IS A CONSENT?

To provide the predictability companies need and to ensure they have things under proper control, the regulations require them to secure the PSA's consent at key project milestones. Consents are necessary for all activity on the NCS.

What does a consent from the PSA signify?

A consent formally expresses the PSA's confidence that the applicant can complete the relevant operation in a prudent manner and in compliance with regulatory requirements.

In principle, it has no expiry date but applies as long as the relevant activity is due to last. Throughout that time, the company is responsible for checking compliance with the preconditions which the consent builds on.

Should a nonconformity be discovered, the player must take the necessary steps to rectify or remove this on its own initiative so that safety is fully maintained.

A consent does *not* mean that the PSA *approves* a facility, equipment, components, procedures, qualifications or the like.

The companies are responsible at all times for their own activities. This allocation of responsibility is a cornerstone of Norwegian petroleum operations.

When must an operator obtain a consent?

Operators must apply for consent from the PSA at the following milestones:

- before investigations where drilling goes deeper than 200 metres beneath the seabed
- before exploration drilling
- before diver-assisted subsea operations
- before starting to use all or part of a facility
- before major modifications or changes of use
- before using a facility beyond its design life and the existing preconditions
- before disposal, removal or moving of a facility
- before removing or changing the use of a vessel with significant safety functions.

WHAT IS AN AOC?

All mobile units (primarily drilling rigs) included in a national ship register must have an acknowledgement of compliance (AoC) from the PSA to participate in petroleum operations on the NCS.

This expresses the regulator's confidence that the unit in question can conduct the intended work within the regulatory framework.

The decision to award an AoC is based on information provided by the applicant in a dedicated application. This must cover both technical conditions on the unit and the company's safety management organisation and systems.

Information in the application is verified by the PSA using random checks in selected areas through an audit and/or questions to the contractor/owner.

What is the purpose of an AoC?

The purpose of the AoC scheme is to clarify responsibility, enhance the efficiency of the consent process and provide greater predictability for players in the industry.

Is this an approval scheme?

No arrangements exist in the industry which mean that the PSA approves a facility, items of equipment, components, procedures, qualifications or the like.

This is a logical consequence of the principle that the companies are always responsible for their own activities. Any regulatory *approval* would shift responsibility to the government.

But the players do need a certain degree of predictability in their operations. Awarding an AoC to a mobile unit simplifies the process when the PSA later receives a request for consent to pursue a activity with this rig/facility.

The AoC document then forms part of the basis for considering the application.



WHAT IS THE AMBITION FOR SAFETY?

The Norwegian Storting (parliament) wants Norway's petroleum industry to be the world leader for HSE. In place for many years, this ambition has been important in work to develop the industry.

How can the industry reach the target?

Integrated management and continuous improvement are the key requirements for success. These principles must form the basis for all safety work by the industry, and carry great weight in decisions and measures by both the players and the government.

What is continuous improvement?

The requirement for continuous improvement is therefore a key principle for the petroleum sector.

Pursuant to the petroleum regulations, players must always continue developing and improving the level of HSE. Among other considerations, this means that the companies must systematically assess adopting available technology and new knowledge.

Ensuring continuous improvement is the responsibility of company managements.

Why is learning important?

Companies are expected not to repeat errors which might have been avoided if they had learnt from their own errors and experience or those of others.

Drawing lessons from undesirable incidents is absolutely essential for preventing accidents, and crucial for continuous improvement.

Companies must systematically secure information about relevant conditions, share this with others and ensure that it is actually utilised for improvement and prevention.

Is it ever possible to be content?

It is implicit in the nature of the industry that full satisfaction will always be impossible. While good results must be acclaimed, nobody can simply relax and be content.

Self-satisfaction is dangerous, and could be a contributory cause of accidents.

Safety will always be a perishable commodity. The fact that improvements have been achieved, and that the level of HSE is high, offers no guarantee for the future.

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