

**REGULATIONS RELATING TO MANAGEMENT IN THE  
PETROLEUM ACTIVITIES  
(THE MANAGEMENT REGULATIONS)**

**Petroleum Safety Authority Norway (PSA)  
Norwegian Pollution Control Authority (SFT)  
Norwegian Social and Health Directorate (NSHD)**

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**Regulations relating to management in the petroleum activities (the management regulations). Issued by the Norwegian Petroleum Directorate 3 September 2001 pursuant to Act 29 November 1996 No. 72 relating to petroleum activities Section 10-18, Act 4 February 1977 No. 4 relating to worker protection and working environment etc., Section 2 subsection 3 first to fourth paragraphs inclusive and Section 16 a, and Regulations 31 August 2001 relating to health, environment and safety in the petroleum activities, Section 57 first paragraph litera a. Issued by the Norwegian Pollution Control Authority 3 September 2001 pursuant to Act 13 March 1981 No. 6 relating to protection against pollution and relating to waste, Sections 9, 40 and 52 litera b, Act 11 June 1976 no 79 relating to the control of products and consumer services, Section 8 last paragraph and Regulations 31 August 2001 relating to health, environment and safety in the petroleum activities, Section 57 first paragraph litera a. Issued by the Norwegian Board of Health 3 September 2001 pursuant to Act 2 July 1999 No. 64 relating to health personnel, Section 16 second paragraph and Section 76 last paragraph, Act 5 August 1994 No. 55 relating to control of communicable diseases Section 1-2 third paragraph and Section 8-4, and Regulations 31 August 2001 relating to health, environment and safety in the petroleum activities, Section 57 first paragraph litera a. Amended 16 December 2002. Last amended 21 December 2004.**

## **CHAPTER I RISK MANAGEMENT**

### **Section 1 Risk reduction**

In risk reduction as mentioned in the [Framework Regulations Section 9](#) on principles relating to risk reduction, the party responsible shall choose technical, operational and organisational solutions which reduce the probability that failures and situations of hazard and accident will occur.

In addition barriers shall be established which

- a) reduce the probability that any such failures and situations of hazard and accident will develop further,
- b) limit possible harm and nuisance.

Where more than one barrier is required, there shall be sufficient independence between the barriers.

The solutions and the barriers that have the greatest risk reducing effect shall be chosen based on an individual as well as an overall evaluation. Collective protective measures shall be preferred over protective measures aimed at individuals.

### **Section 2 Barriers**

The operator or the one responsible for the operation of a facility, shall stipulate the strategies and principles on which the design, use and maintenance of barriers shall be based, so that the barrier function is ensured throughout the life time of the facility.

It shall be known what barriers have been established and which function they are intended to fulfil, cf. [Section 1](#) on risk reduction, second paragraph, and what performance requirements have been defined in respect of the technical, operational or organisational elements which are necessary for the individual barrier to be effective.

It shall be known which barriers are not functioning or have been impaired.

The party responsible shall take necessary actions to correct or compensate for missing or impaired barriers.

## **CHAPTER II MANAGEMENT ELEMENTS**

### **Section 3**

#### **Management of health, environment and safety**

The party responsible shall ensure that the management of health, environment and safety comprises the activities, resources, processes and the organisation necessary to ensure prudent activities and continual improvement, cf. [Section 13 of the Framework Regulations](#) on the duty to establish, follow up and further develop a management system.

Responsibility and authority shall be unambiguously defined at all times.

The necessary steering documents shall be prepared, and the necessary reporting lines shall be established.

### **Section 4**

#### **Objectives and strategies**

The party responsible shall stipulate and further develop objectives and strategies in order to improve health, environment and safety.

The operator shall ensure that there is accordance between short term and long term objectives within different areas, at different levels and between different participants in the petroleum activities.

The objectives shall be expressed in such way as to make it possible to assess to what degree objectives have been achieved.

### **Section 5**

#### **Internal requirements**

The party responsible shall set internal requirements which put the regulatory requirements in concrete terms, and which contribute to achieving the objectives in relation to health, environment and safety, cf. [Section 4](#) on objectives and strategies. If the internal requirements are expressed functionally, criteria of fulfilment shall be established.

The operator shall ensure that there is accordance between his own requirements, as well as between own requirements and the requirements of other participants.

### **Section 6**

#### **Acceptance criteria for major accident risk and environmental risk**

The operator shall set acceptance criteria for major accident risk and environmental risk.

Acceptance criteria shall be set for

- a) the personnel on the facility as a whole, and for groups of personnel which are particularly risk exposed,
- b) the loss of main safety functions as mentioned in [the Facilities Regulations Section 6](#) on main safety functions,
- c) pollution from the facility,
- d) damage done to third party.

The acceptance criteria shall be used in assessing results from the quantitative risk analyses, cf. [Section 14](#) on analysis of major accident risk, [Section 15](#) on quantitative risk analyses and emergency preparedness analyses and [Section 16](#) on environmentally oriented risk and emergency preparedness analyses. Cf. also the [Framework Regulations Section 9](#) on principles relating to risk reduction.

### **Section 7**

#### **Monitoring parameters and indicators**

The party responsible shall establish monitoring parameters within his areas of activity in order to monitor matters of significance to health, environment and safety, including the degree of achieving objectives, cf. [Section 4](#) on objectives and strategies and [Section 5](#) on internal requirements.

The operator or the one responsible for the operation of a facility, shall establish indicators to monitor changes and trends in major accident risk.

### **Section 8**

#### **Basis and criteria for decision**

Prior to decisions being made, the party responsible shall ensure that issues relating to health, environment and safety have been comprehensively and adequately considered.

The decision criteria shall be based on the stipulated objectives, strategies and requirements relating to health, environment and safety and shall be available prior to decisions being made.

Necessary co-ordination of decisions shall be ensured at the various levels and in the various areas in order to avoid unintentional effects.

Prerequisites that form the basis for a decision, shall be expressed so that they can be followed up.

## **CHAPTER III**

### **RESOURCES AND PROCESSES**

#### **Section 9**

##### **Planning**

The party responsible shall plan the activities in the petroleum activities in accordance with the stipulated objectives, strategies and requirements so that the plans give due consideration to health, environment and safety.

The resources required to carry out the planned activities shall be placed at the disposal of project and operational organisations.

The operator or the one responsible for the operation of a facility shall ensure that plans that are of significance to health, environment and safety are co-ordinated, cf. [Section 8](#) on basis and criteria for decision.

#### **Section 10**

##### **Work processes**

The party responsible shall ensure that the work processes and the products thereof fulfil the requirements relating to health, environment and safety.

Work processes of significance to health, environment and safety and interfaces between these shall be described. The level of detail in the description shall be adapted to the significance of the processes in relation to health, environment and safety.

#### **Section 11**

##### **Manning and competence**

The party responsible shall ensure adequate manning and competence in all phases of the petroleum activities, cf. [the Framework Regulations Section 10](#) on organisation and competence.

There shall be set minimum requirements to manning and competence in respect of functions

- a) where mistakes may have serious consequences in relation to health, environment and safety,
- b) which shall reduce the probability of failures and situations of hazard and accident developing further, cf. [Section 1](#) on risk reduction and [Section 10](#) on work processes.

In the manning of the various work tasks it shall be ensured that the personnel is not assigned tasks that are incompatible with each other.

The prerequisites that form the basis for the defined manning and competence, shall be followed up.

When changes in manning take place, possible consequences for health, environment and safety shall be reviewed.

**Section 12  
Information**

The party responsible shall identify the information which is necessary to enable planning and conduct of the petroleum activities and to improve health, environment and safety.

It shall be ensured that the necessary information is acquired, processed and disseminated to relevant users at the right time.

Information and communication systems which satisfy the need for acquisition, processing and dissemination of data and information, shall be established.

**CHAPTER IV  
ANALYSES**

**Section 13  
General requirements to analyses**

The party responsible shall ensure that analyses are carried out, which provide the necessary decision basis in order to give due consideration to health, environment and safety. When carrying out and updating the analyses, recognised models, methods and techniques and the best available data shall be used.

The purpose of the individual analysis shall be made clear, together with the conditions, assumptions and delimitations on which the analyses are based.

The individual analysis shall be presented so that the target groups get a complete and comprehensive presentation of the results.

Analyses shall be updated when alterations in the conditions, assumptions and delimitations individually or as a whole affect the results of the analyses, or when other new knowledge of significance to the results of the analyses exists. Criteria shall be set for updating of analyses.

The operator or the one responsible for the operation of a facility, shall have a complete record of the analyses that are carried out. Necessary consistency between analyses that are supplementary to or are based on each other, shall be ensured.

**Section 14  
Analysis of major accident risk**

Quantitative risk analyses and other necessary analyses shall be carried out to identify contributors to major accident risk, including showing

- a) the risk connected with planned drilling and well activities, and show which effect these activities have on the total risk on the facility,
- b) the effect of modifications and the carrying out of modifications on the total risk,
- c) the risk connected with transportation of personnel between the continental shelf and shore and between facilities.

The analyses shall in addition be used to set conditions for operation and to classify areas, systems and equipment with respect to risk.

**Section 15  
Quantitative risk analyses and emergency preparedness analyses**

Quantitative risk analyses which provide a balanced and as comprehensive picture as possible of the risk shall be carried out. The risk analyses shall

- a) identify situations of hazard and accident, select initiating incidents and map the causes of the incidents,

- b) carry out modelling of accident sequences and consequences so that, among other things, possible dependencies between physical barriers can be revealed, and so that the requirements that must be set in respect of the performance of the barriers, can be calculated,
- c) classify important safety systems,
- d) show that the main safety functions are adequately provided for,
- e) identify dimensioning accidental loads,
- f) provide the basis for selecting the defined situations of hazard and accident.

Necessary sensitivity calculations and evaluations of uncertainties shall be carried out.

Emergency preparedness analyses shall be carried out which shall

- a) define situations of hazard and accident,
- b) set performance requirements to the emergency preparedness,
- c) select and dimension emergency preparedness measures.

### **Section 16**

#### **Environmentally oriented risk and emergency preparedness analyses**

Environmentally oriented risk analyses shall be carried out in respect of the individual facility. The analyses shall, inter alia, be carried out for acute pollution and for background load. It shall be possible to compare similar types of environmental risk contributions from various facilities unambiguously.

Environmentally oriented emergency preparedness analyses shall be carried out in respect of the facility. Prior to the carrying out of the emergency preparedness analyses, the operator shall set objectives for protection of prioritised vulnerable resources. The analyses shall comprise the categories near to source, open sea, coast and shore zone and ensure that differences in vulnerability in different geographical areas are accounted for.

Results from characterisation of oil and chemicals and actual efficiency figures for emergency preparedness material shall be part of the analysis basis. Before the analysis is carried out, various equipment alternatives and their availability shall be looked into, cf. the [Facilities Regulations Section 41](#) on material for action against acute pollution.

### **Section 17**

#### **Analysis of the working environment**

Necessary analyses which will ensure a sound working environment and provide decision support in the choice of technical, operational and organisational solutions, shall be carried out. The analyses shall, inter alia, contribute to improving the health, well being and security of the employees, and to preventing personal injury, deaths and work related disease as a result of

- a) mistakes that may lead to situations of hazard and accident,
- b) exposure and physical or mental strain.

## **CHAPTER V**

### **MEASURING, FOLLOW-UP AND IMPROVEMENT**

#### **Section 18**

##### **Collection, processing and use of data**

The party responsible shall ensure that data are collected, processed and used to

- a) monitor and control technical, operational and organisational aspects,
- b) produce monitoring parameters, indicators and statistics,
- c) carry out and follow up analyses during various phases of the activities,
- d) generate generic data bases,
- e) take corrective and preventive actions, including improvement of systems and equipment.

Requirements shall be set with regard to the quality and the validity of the data, based on the relevant user needs.

### **Section 19**

#### **Registration, examination and investigation of situations of hazard and accident**

The party responsible shall ensure that situations of hazard and accident that have occurred and that may lead to or has led to injury, harm or pollution, are recorded and examined in order to prevent recurrence.

Situations frequently recurring or representing severe actual or potential consequences, shall be examined closely through investigation.

Criteria shall be set as to which situations are to be recorded, examined and investigated, and requirements shall be set with regard to extent and organisation.

The operator shall keep a complete record of situations of hazard and accident that have occurred.

### **Section 20**

#### **Handling of non-conformities**

The party responsible shall record and follow up non-conformities to the requirements relating to health, environment and safety legislation, including non-conformities to internal requirements that are of significance to fulfilling the requirements contained in the health, environment and safety legislation. To what extent the non-conformities are of significance to health, environment and safety, individually and in relation to other non-conformities, shall be considered and determined.

Non-conformities shall be corrected, their causes shall be established and corrective actions shall be taken to prevent recurrence of the non-conformity. The actions shall be followed up and their effect shall be evaluated.

Until non-conformities have been corrected, necessary compensating actions shall be taken in order to maintain a fully satisfactory level of health, environment and safety.

Necessary preventive actions shall be taken to avoid other potential non-conformities.

The party responsible shall keep a record of the status of non-conformities in his own activities. The operator or the one responsible for the operation of a facility, shall keep a complete record.

### **Section 21**

#### **Follow-up**

The party responsible shall follow up to see that all elements of his own and of other participants' management system are established and functioning as intended, and that a fully satisfactory level of health, environment and safety exists.

This follow-up shall contribute to identifying technical, operational or organisational weaknesses, failures and deficiencies.

Methods, frequency and extent of the follow-up, and the degree of independence in conducting it, shall be adapted to the significance of the element to health, environment and safety.

### **Section 22**

#### **Improvement**

The party responsible shall continually improve health, environment and safety by identifying the processes, activities and products that need improvement, and implement necessary improvement measures. The measures shall be followed up and their effect shall be evaluated.

The individual person shall be stimulated to take active part in identifying weaknesses and suggest solutions, cf. the [Framework Regulations Section 11](#) on sound health, environment and safety culture.

Provision shall be made for using knowledge gained through experience from own activities as well as the activities of others in the improvement efforts.

## **CHAPTER VI ENTRY INTO FORCE**

### **Section 23 Entry into force**

These regulations enter into force 1 January 2002.