

**REGULATIONS RELATING TO  
CONDUCTING PETROLEUM ACTIVITIES  
(THE ACTIVITIES REGULATIONS)**

**(Last amended 16 December 2014, cf. page 5)**

**Petroleum Safety Authority Norway  
Norwegian Environment Agency  
Norwegian Directorate of Health  
Norwegian Food Safety Authority**



**PETROLEUM SAFETY AUTHORITY  
NORWAY**

# **Regulations relating to conducting petroleum activities (the activities regulations)**

<b>CHAPTER I INTRODUCTORY PROVISIONS</b> .....	<b>5</b>
Section 1 Scope .....	5
Section 2 Responsibilities.....	5
Section 3 Definitions .....	5
<b>CHAPTER II ARRANGEMENTS PURSUANT TO THE WORKING ENVIRONMENT ACT</b> .....	<b>6</b>
Section 4 Coordinating working environment committees for fields, and joint, local working environment committees for mobile facilities.....	6
Section 5 Occupational health service.....	6
Section 6 Medical examinations for employees .....	6
Section 7 Registration of working hours .....	6
<b>CHAPTER III HEALTH RELATED MATTERS</b> .....	<b>7</b>
Section 8 The health service.....	7
Section 9 The health service's tasks.....	7
Section 10 Physician on-call.....	7
Section 11 Medicines and medical equipment .....	7
Section 12 Communicable diseases.....	7
Section 13 Food and drinking water.....	7
Section 14 Cleaning.....	8
<b>CHAPTER IV PRELIMINARY SURVEYS AND INSTALLATION</b> .....	<b>8</b>
Section 15 Preliminary surveys .....	8
Section 16 Installation and commissioning .....	8
<b>CHAPTER V TRANSPORT AND STAY</b> .....	<b>8</b>
Section 17 Transport.....	8
Section 18 Stay on facilities .....	8
Section 19 Accommodation and cabin sharing .....	9
<b>CHAPTER VI OPERATIONAL PREREQUISITES FOR START-UP AND USE</b> .....	<b>9</b>
Section 20 Start-up and operation of facilities .....	9
Section 21 Competence .....	9
Section 22 Safety and working environment training pursuant to the Working Environment Act.....	9
Section 23 Training and drills .....	10
Section 24 Procedures .....	10
Section 25 Use of facilities.....	10
Section 26 Safety systems .....	10
Section 27 Critical activities.....	10
Section 28 Simultaneous activities .....	10
<b>CHAPTER VII PLANNING AND EXECUTION</b> .....	<b>11</b>
Section 29 Planning.....	11
Section 29a Storage, handling and use of explosives .....	11
Section 30 Safety-clearance of activities.....	11
Section 31 Monitoring and control.....	11
Section 32 Transfer of information at shift and crew changes .....	11
<b>CHAPTER VIII WORKING ENVIRONMENT FACTORS</b> .....	<b>12</b>
Section 33 Organisation of work .....	12
Section 34 Ergonomic aspects.....	12
Section 35 Psychosocial aspects.....	12
Section 36 Chemical health hazard .....	12
Section 37 Radiation.....	12

Section 38 Noise.....	12
Section 39 Vibrations .....	13
Section 40 Outdoor work.....	13
Section 41 (Repealed by Regulations 20 December 2012) .....	13
Section 42 (Repealed by Regulations 20 December 2012) .....	13
Section 43 (Repealed by Regulations 20 December 2012) .....	13
Section 44 Risk information during execution of work.....	13
<b>CHAPTER IX MAINTENANCE.....</b>	<b>13</b>
Section 45 Maintenance .....	13
Section 46 Classification .....	14
Section 47 Maintenance programme .....	14
Section 48 Planning and prioritisation.....	14
Section 49 Maintenance effectiveness.....	14
Section 50 Special requirements for technical condition monitoring of structures, maritime systems and pipeline systems .....	14
Section 51 Specific requirements for testing of blowout preventer and other pressure control equipment .....	15
<b>CHAPTER X MONITORING THE EXTERNAL ENVIRONMENT .....</b>	<b>15</b>
Section 52 General requirements to environmental monitoring.....	15
Section 53 Baseline surveys .....	15
Section 54 Environmental monitoring of benthic habitats .....	15
Section 55 Environmental monitoring of the water column.....	16
Section 56 Follow-up of monitoring results .....	16
Section 57 Remote measuring of acute pollution.....	16
Section 58 Environmental surveys in the event of acute pollution .....	16
Section 59 Characterisation of oil and condensate .....	16
<b>CHAPTER XI EMISSIONS AND DISCHARGES TO THE EXTERNAL ENVIRONMENT.....</b>	<b>17</b>
Section 60 Discharge of oily water.....	17
Section 61 Emissions to air .....	17
Section 62 Ecotoxicological testing of chemicals .....	17
Section 63 Categorisation of chemicals.....	18
Section 64 Environmental assessments .....	19
Section 65 Choice of chemicals.....	19
Section 66 Use and discharge of chemicals.....	19
Section 67 Emergency preparedness chemicals .....	19
Section 68 Discharge of cuttings, sand and solid particles.....	19
Section 69 Discharge from formation testing and clean-up of wells.....	20
Section 70 Measuring the discharged quantity of oil, other substances and water .....	20
Section 71 Measuring associated fluids discharged with solids.....	20
<b>CHAPTER XII WASTE .....</b>	<b>20</b>
Section 72 Waste .....	20
<b>CHAPTER XIII EMERGENCY PREPAREDNESS .....</b>	<b>21</b>
Section 73 Establishment of emergency preparedness .....	21
Section 74 Shared use of emergency preparedness resources .....	21
Section 75 Emergency preparedness organisation .....	21
Section 76 Emergency preparedness plans.....	21
Section 77 Handling hazard and accident situations .....	21
Section 78 Regional preparedness for acute pollution .....	22
Section 79 Action against acute pollution .....	22
<b>CHAPTER XIV COMMUNICATION .....</b>	<b>22</b>
Section 80 Communication .....	22
<b>CHAPTER XV DRILLING AND WELL ACTIVITIES.....</b>	<b>22</b>

Section 81 Well programme .....	22
Section 82 Well location and wellbore.....	23
Section 83 Shallow gas and shallow formation fluids.....	23
Section 84 Monitoring well parameters.....	23
Section 85 Well barriers .....	23
Section 86 Well control .....	23
Section 87 Controlled well stream.....	23
Section 88 Securing wells .....	23
Section 89 Remote operation of pipes and work strings .....	24
<b>CHAPTER XVI MARITIME OPERATIONS .....</b>	<b>24</b>
Section 90 Positioning .....	24
<b>CHAPTER XVII ELECTRICAL INSTALLATIONS.....</b>	<b>24</b>
Section 91 Work on and operation of electrical installations .....	24
<b>CHAPTER XVIII LIFTING OPERATIONS .....</b>	<b>24</b>
Section 92 Lifting Operations .....	24
<b>CHAPTER XIX MANNED UNDERWATER OPERATIONS.....</b>	<b>25</b>
Section 93 Manned underwater operations .....	25
Section 94 Time limit provisions.....	25
<b>CHAPTER XX CONCLUDING PROVISIONS .....</b>	<b>26</b>
Section 95 Supervision, decisions, enforcement etc.....	26
Section 96 Entry into force.....	26

## **Regulations relating to conducting petroleum activities (the Activities Regulations).**

Stipulated by the Petroleum Safety Authority Norway on 29 April 2010 in pursuance of Section 10-18 of the Act of 29 November 1996 No. 72 relating to the petroleum activities, Sections 1-3, 2-2, 3-2, 3-3, 3-5, 4-2, 4-3, 4-5 and 4-6 of the Act of 17 June 2005 No. 62 relating to working environment, working hours and job protection, etc. and Section 68, first subsection litera c of the Regulations of 12 February 2010 No. 158 relating to health, safety and the environment in the petroleum activities, etc.

Stipulated by the Climate and Pollution Agency on 29 April 2010 in pursuance of Sections 9, 40 and 42 of the Act of 13 March 1981 No. 6 relating to protection against pollution and relating to waste and Section 68, first subsection litera c of the Regulations of 12 February 2010 No. 158 relating to health, safety and the environment in the petroleum activities, etc.

Stipulated by the Norwegian Directorate of Health on 29 April 2010 in pursuance of Section 16, second subsection and Section 76, final subsection of the Act of 2 July 1999 No. 64 relating to health personnel, Section 1-2, third subsection and Section 8-4 of the Act of 5 August 1994 No. 55 relating to protection against contagious illnesses, and Section 68, first subsection litera c of the Regulations of 12 February 2010 No. 158 relating to health, safety and the environment in the petroleum activities, etc.

Stipulated by the Norwegian Food Safety Authority on 29 April 2010 in pursuance of Sections 16 and 23 of the Act of 19 December 2003 No. 124 relating to food production and food safety, etc. and Section 68, first subsection litera c of the Regulations of 12 February 2010 No. 158 relating to health, safety and the environment in the petroleum activities, etc. Amended 28 June 2012. Amended 20 December 2012. Amended 23 December 2013. Last amended 16 December 2014.

## **CHAPTER I INTRODUCTORY PROVISIONS**

### **Section 1 Scope**

These regulations apply to offshore petroleum activities, with exceptions as mentioned in [Section 4 of the Framework Regulations](#).

Requirements in these regulations also apply to activities related to facilities and other equipment necessary to conduct manned underwater operations from vessels.

### **Section 2 Responsibilities**

[Section 7 of the Framework Regulations](#) applies correspondingly to these regulations.

### **Section 3 Definitions**

Definitions as mentioned in [Section 6 of the Framework Regulations](#) apply correspondingly to these regulations.

## **CHAPTER II ARRANGEMENTS PURSUANT TO THE WORKING ENVIRONMENT ACT**

### **Section 4**

#### **Coordinating working environment committees for fields, and joint, local working environment committees for mobile facilities**

A coordinating working environment committee shall be established for each field, or, where all parties are in agreement, a coordinating working environment committee that covers several fields, where these have shared management and operations organisations, shared contractors and contracts, and where considerable personnel groups work on several of these fields. A joint, local working environment committee shall also be established for each individual mobile facility. The committees shall coordinate and process matters concerning safety and the environment, cf. [Section 34, second subsection of the Framework Regulations](#).

Employer and employee representatives from the various main activity areas on the field or on the mobile facility shall participate in the coordinating or the joint, local working environment committee, respectively. For mobile facilities, a representative of the operator shall participate, except during transit.

When a mobile facility is part of the petroleum activities on a field, the operator shall ensure coordination between the joint, local working environment committee and the coordinating working environment committee.

### **Section 5**

#### **Occupational health service**

The employer shall ensure that the enterprise has or is affiliated with an approved occupational health service with competence adapted to the enterprise's risk factors.

The operator or the party responsible for operating a facility, shall ensure cooperation between its occupational health service and similar personnel working for the other employers.

### **Section 6**

#### **Medical examinations for employees**

The employer shall ensure the employees are offered regular health examinations to reveal long-term effects of working environment factors.

Employees who have undergone biological examinations shall have access to the results that concern to what extent he/she has been exposed to hazardous conditions.

The employer shall also ensure the employees are offered a health examination before they are assigned work that can entail particular health risks, so that preventive measures can be implemented.

Employees who have been subjected to hazardous exposure in their work, shall be offered special health examinations if they are still employed, so that any corrective measures can be implemented.

### **Section 7**

#### **Registration of working hours**

The employer shall create a system to register and follow up working hours for all employees in the individual enterprises. The same applies to personnel in management or particularly independent positions as mentioned in Section 10-12, first and second subsection of the [Working Environment Act](#), when this position is important as regards safety.

When work is carried out on several work sites for the same employer, this employer shall register the total working hours.

## **CHAPTER III HEALTH RELATED MATTERS**

### **Section 8**

#### **The health service**

The operator or the party responsible for operating a facility shall ensure that anyone staying on the facility has access to professionally competent health services, cf. [Section 16 of the Framework Regulations](#).

A physician shall have the professional responsibility for the health service.

The necessary number of nurses shall at all times be present on the facility to ensure prudent safeguarding of the health service's tasks.

The enterprise shall employ or have on-call other health personnel to the extent necessary.

The health service shall take a separate and independent position in health-related matters.

### **Section 9**

#### **The health service's tasks**

The health service shall

- a) promote health and contribute to preventing illness and injury by
  - i) gathering and communicating information on conditions in the enterprise that can affect the general health,
  - ii) ensuring prudent hygienic conditions,
  - iii) implementing preventive measures within its area of responsibility,
- b) carry out diagnostics and treatment in connection with illness and injury, including organising first aid in the event of accidents,
- c) contribute to establishing the health emergency preparedness as part of the enterprise's total emergency preparedness, including transport of sick and injured personnel.

### **Section 10**

#### **Physician on-call**

The health service shall have a physician on-call at all times, who can be summoned to the facility on the shortest possible notice.

### **Section 11**

#### **Medicines and medical equipment**

[The Regulations relating to medicines handling for enterprises and health personnel that provide medical treatment \(in Norwegian only\)](#) apply to the handling of medicines, with the exception of Section 10.

Medicines and medical equipment shall be adapted to the need during operation of the facility and in the event of emergency situations. Medicines and medical equipment shall be regularly checked and stocks replenished.

### **Section 12**

#### **Communicable diseases**

The physician responsible for the health service on the facility shall have corresponding responsibility concerning communicable diseases as a district medical officer according to the [Contagious Illness Protection Act \(in Norwegian only\)](#) with associated regulations.

### **Section 13**

#### **Food and drinking water**

The food on the facility shall at all times be of such quantity and quality to ensure that the hygienic and nutritional needs of the personnel are satisfied.

The provisions in the [Drinking Water Regulations \(in Norwegian only\)](#) apply to the water supply and drinking water in the petroleum activities.

## **Section 14**

### **Cleaning**

Cleaning shall be planned and conducted such that the indoor environment is hygienic and aesthetically satisfactory at all times.

## **CHAPTER IV PRELIMINARY SURVEYS AND INSTALLATION**

## **Section 15**

### **Preliminary surveys**

Before facilities are placed, the necessary preliminary surveys ensuring prudent installation, use and disposal of the facilities shall be carried out.

## **Section 16**

### **Installation and commissioning**

During installation of facilities and parts of these, it shall be ensured that the loads they are exposed to, do not exceed the loads mentioned in [Section 11 of the Facilities Regulations](#).

Upon completion of facilities, it shall be ensured that they fulfil the requirements in the [Facilities Regulations](#), cf. also [Section 23 of the Framework Regulations](#) and [Section 5 of the Management Regulations](#). The technical condition of facilities, systems and equipment shall be maintained until the facilities, systems and equipment are put into service.

## **CHAPTER V TRANSPORT AND STAY**

## **Section 17**

### **Transport**

The operator shall ensure that people and supplies can be transported safely to, from and between facilities and vessels during placement, installation and use, and for the chosen disposal alternative.

Transport shall be coordinated with emergency preparedness, as mentioned in [Section 73](#).

## **Section 18**

### **Stay on facilities**

Only those who work on a facility, have access to it. Others shall have permission from the operator or a party authorised by the operator.

The operator shall ensure that a comprehensive overview is available at all times of everyone staying on or on their way to or from a facility or vessel participating in the petroleum activities.

Everyone staying on such facilities or vessels, shall be provided with sufficient information on applicable rules for the stay, and compliance shall be ensured.

Based on safety considerations, the Petroleum Safety Authority Norway can, through administrative decision, determine the total number of people allowed to stay on a facility. In special cases, the Petroleum Safety Authority Norway can prohibit visits.



## **Section 19**

### **Accommodation and cabin sharing**

Cabin sharing is not permitted unless the conditions of second subsection are satisfied. Cabin sharing means that two persons have the use of the same single cabin for 24 hours, but in such a way that both of them sleep alone.

Following discussions with the employee representatives, cabin sharing can be used in the following cases:

- a) restoring of physical barriers and in other acute situations
- b) turnaround/revision stop
- c) hook-up and start-up

In the event of cabin sharing as given in second subsection litera b and c, the total individual strain shall be taken into account and, if necessary, use of cabin sharing shall be spread so that it comprises all employees accommodated on the facility at the time in question. Use of cabin sharing shall be compensated for.

In the event of a decision regarding the duration and scope of such accommodation, cf. also [Section 11 of the Management Regulations](#), the consequences shall be clarified and compensating measures shall be implemented to ensure safety and necessary rest and restitution. Which compensating measures to implement, shall be discussed with the employee representatives.

## **CHAPTER VI**

### **OPERATIONAL PREREQUISITES FOR START-UP AND USE**

## **Section 20**

### **Start-up and operation of facilities**

Before facilities and parts of these are started up for the first time or after technical modifications, the commissioning as mentioned in [Section 16](#), shall be carried out.

During start-up as mentioned in the first subsection, and during operation,

- a) the management system with associated processes, resources and operations organisation shall be established,
- b) governing documents, including technical operations documents, shall be available in an updated version and the operations personnel shall be familiar with them,
- c) systems for employee participation shall be established, cf. [Section 13 of the Framework Regulations](#),
- d) the health service shall be in accordance with [Section 8](#) and
- e) the occupational health service shall be in accordance with [Section 5](#).

## **Section 21**

### **Competence**

The responsible party shall ensure that the personnel at all times have the competence necessary to carry out the activities in accordance with the health, safety and environment legislation. In addition, the personnel shall be able to handle hazard and accident situations, cf. [Section 14 of the Management Regulations](#) and [Section 23](#) of these regulations.

Personnel who will carry out bell diving or surface-oriented diving, shall have a valid certificate. The Petroleum Safety Authority Norway appoints suitable enterprises to issue certificates on its behalf. Payment can be charged for issuance of certificates.

## **Section 22**

### **Safety and working environment training pursuant to the [Working Environment Act](#)**

Managers and others with responsibility for decisions that affect the working environment, shall be provided the same training as members of working environment committees and safety delegates.

The individual employee and manager shall be provided with training in working environment factors of significance for conducting their work.

Managers with direct responsibility for work with radioactive sources shall have completed theoretical and practical radiation protection training.

The employees shall be provided necessary training in health and safety matters, and the training shall take place during working hours. Criteria shall be set for what constitutes necessary training.

Training as mentioned in the fourth subsection, shall be provided upon employment, transfer or change of work tasks, introduction of new work equipment or changes to the equipment and upon introduction of new technology that applies to the individual's workplace or work tasks.

The training shall be adapted to the changed or new risk in the enterprise, and repeated when necessary.

### **Section 23**

#### **Training and drills**

The responsible party shall ensure that necessary training and necessary drills are conducted, so that the personnel are always able to handle operational disturbances and hazard and accident situations in an effective manner.

### **Section 24**

#### **Procedures**

The responsible party shall set criteria for when procedures shall be used to prevent faults and hazard and accident situations.

It shall be ensured that procedures are established and used in such a way as to fulfil their intended functions.

### **Section 25**

#### **Use of facilities**

Use of facilities and parts of these shall be in accordance with requirements stipulated in and in pursuance of the health, safety and environment legislation and any additional limitations that follow from fabrication, installation and commissioning. The use shall at all times be in accordance with the facility's technical condition and the assumptions for use that form the basis for prudent activities.

When setting restrictions for the activity level on the facility, the maintenance status shall also be considered.

### **Section 26**

#### **Safety systems**

The measures and restrictions that are necessary for maintaining the safety systems' barrier functions in the event of overbridging, disconnection or other impairment, shall be set in advance. The compensatory measures shall be implemented as rapidly as possible when such impairment occurs.

The status of all safety systems shall be known by and available for relevant personnel at all times.

### **Section 27**

#### **Critical activities**

It shall be ensured that critical activities are carried out within the operational restrictions set during the engineering phase and in the risk analyses as mentioned in [Section 16 of the Management Regulations](#), cf. also [Section 30](#) of these regulations.

### **Section 28**

#### **Simultaneous activities**

The responsible party shall define which activities that, in combination with other activities, shall be considered simultaneous activities.

When conducting simultaneous activities that contribute to an unacceptable increase in risk, the necessary measures shall be implemented, cf. [Section 9 of the Management Regulations](#).

## **CHAPTER VII PLANNING AND EXECUTION**

### **Section 29 Planning**

When scheduling activities on the individual facility, the responsible party shall ensure that important risk contributors are kept under control, both individually and overall, cf. also [Section 12 of the Management Regulations](#).

The planning shall consider the status of important risk contributors and changes in risk evident from the risk indicators, cf. [Section 10 of the Management Regulations](#).

### **Section 29a Storage, handling and use of explosives**

It shall be ensured that potentially dangerous explosives shall be able to be simply handled and removed in the event of a hazard and accident situation.

Explosives shall be secured such that they do not go off unintentionally during storage, handling and use.

### **Section 30 Safety-clearance of activities**

Planned activities shall be cleared as regards safety before they are carried out. Which conditions shall be met, shall be evident from the clearance, including which measures shall be implemented before, during and after the work so that those participating in or who may be affected by the activity, are not injured, and so that the likelihood of mistakes that can lead to hazard and accident situations is reduced.

### **Section 31 Monitoring and control**

The responsible party shall ensure that matters of significance for prudent execution of the activities as regards health and safety, are monitored and kept under control at all times, cf. [Section 19 of the Management Regulations](#).

Activities in connection with the flight weather service shall be carried out according to [Section 31 of the Civil Aviation Authority's Regulations relating to flight over the continental shelf – commercial aviation to and from the helicopter deck on permanent and mobile offshore facilities \(in Norwegian only\)](#), and in the [Civil Aviation Authority's Regulations relating to flight weather service \(in Norwegian only\)](#).

Personnel with control and monitoring functions shall at all times be able to efficiently collect and process information on such conditions, cf. also [Section 14 of the Management Regulations](#).

### **Section 32 Transfer of information at shift and crew changes**

In connection with shift and crew changes, the responsible party shall ensure necessary transfer of information on the status of safety systems and ongoing work, as well as other information of significance for health, safety and the environment during the execution of activities, cf. [Section 15 of the Management Regulations](#).

## **CHAPTER VIII WORKING ENVIRONMENT FACTORS**

### **Section 33**

#### **Organisation of work**

The employer shall ensure that the work is organised so as to avoid hazardous exposure and unfortunate physical and psychological strains for the individual employee, and to reduce the likelihood of mistakes that can lead to hazard and accident situations.

The organisation shall be based on an individual and overall evaluation of acute and long-term effects from the various working environment factors, and on an evaluation of how technology and organisation affect the opportunity to work safely.

The work shall be organised with sufficient consideration for the employee's opportunities, limitations and need for a meaningful work situation, cf. [Section 35](#).

The work shall be planned such that as much work as possible is carried out during the daytime, and such that the employees are ensured the necessary rest and restitution.

The employer shall reduce unfortunate work loads and risks of injury and accidents based on conducted analyses, mapping and gathered information on the employees' own experience of work-related risk and work load conditions.

### **Section 34**

#### **Ergonomic aspects**

The employer shall ensure that the work is organised such that the employees are not exposed to unfortunate work loads as a result of manual handling, working position, repetitive movements, work intensity, etc., cf. also [Section 20 of the Facilities Regulations](#).

### **Section 35**

#### **Psychosocial aspects**

The employers shall ensure a good psychosocial working environment by considering conditions that can influence the employees' health, safety and welfare. Special emphasis shall be accorded the interaction between requirements for work performance, the employees' perception of control over their own work and social support in the working environment.

### **Section 36**

#### **Chemical health hazard**

The employer shall ensure that hazardous chemical exposure during storage, use, handling and disposal of chemicals, and during operations and processes that produce chemical components, is avoided, cf. [Section 15 of the Facilities Regulations](#).

The action values and threshold values in Regulations relating to action values and threshold values (in Norwegian only) shall be corrected by means of a safety factor of 0.6 for a working period of twelve hours, and for persons found to be working under heightened pressure, a safety factor of 0.2 shall apply, except for CO and CO<sub>2</sub>.

### **Section 37**

#### **Radiation**

The employer shall ensure that hazardous exposure during storage, use, handling and disposal of radioactive sources is avoided, cf. [Section 26 of the Facilities Regulations](#).

### **Section 38**

#### **Noise**

The employer shall ensure that no employees are exposed to hazardous noise as mentioned in [Section 23, first subsection of the Facilities Regulations](#).

The exposure action value is  $L_{EX12h} = 80$  dB(A) and  $L_{pCpeak} = 130$  dBC. If the action value is exceeded, risk-reducing measures shall be considered.

Qualified risk assessments shall be carried out, cf. [Section 18 of the Management Regulations](#). These shall cover all aspects of significance for clarifying health and safety hazards as regards exposure to noise.

The work shall be planned and conducted in such a manner that the employees are protected against noise and such that the noise load is reduced to the extent possible. Measures shall be implemented to the extent possible as regards the technical development, or in some other manner limiting the noise exposure in duration and intensity. This also entails that work shall be organised with sufficient noise-free periods.

The employer shall ensure that employees and safety delegates receive continuous information and training on relevant risks in connection with noise if the employees are exposed to noise equal to or exceeding  $L_{EX12h} = 80$  dB or  $L_{pC,peak} = 130$  dB.

### **Section 39 Vibrations**

The employer shall ensure that no employees are exposed to hazardous vibrations, cf. [Section 24 of the Facilities Regulations](#).

### **Section 40 Outdoor work**

The responsible party shall set criteria for which climatic conditions require protective measures during outdoor work, and under which conditions such work shall be limited or halted, cf. also [Section 22 of the Facilities Regulations](#).

### **Section 41 (Repealed by Regulations 20 December 2012)**

### **Section 42 (Repealed by Regulations 20 December 2012)**

### **Section 43 (Repealed by Regulations 20 December 2012)**

### **Section 44 Risk information during execution of work**

It shall be ensured that the employees are provided with information on health risk and the risk of accidents during the work to be performed.

The results of assessments, analyses, measurements, mappings of causes of work-related illnesses, investigations of work accidents and near-accidents, and the importance of these results for work execution, shall be available.

The employees and their representatives shall familiarise themselves with this information.

## **CHAPTER IX MAINTENANCE**

### **Section 45 Maintenance**

The responsible party shall ensure that facilities or parts thereof are maintained, so that they are capable of carrying out their intended functions in all phases of their lifetime.

## **Section 46**

### **Classification**

Facilities' systems and equipment shall be classified as regards the health, safety and environment consequences of potential functional failures.

For functional failures that can lead to serious consequences, the responsible party shall identify the various fault modes with associated failure causes and failure mechanisms, and predict the likelihood of failure for the individual fault mode.

The classification shall be used as a basis in choosing maintenance activities and maintenance frequencies, in prioritising between different maintenance activities and in evaluating the need for spare parts.

## **Section 47**

### **Maintenance programme**

Fault modes that may constitute a health, safety or environment risk, cf. [Section 46](#), shall be systematically prevented through a maintenance programme.

This programme shall include activities for monitoring performance and technical condition, which ensure identification and correction of fault modes that are under development or have occurred.

The programme shall also contain activities for monitoring and control of failure mechanisms that can lead to such fault modes.

## **Section 48**

### **Planning and prioritisation**

An overall plan shall be prepared for conducting the maintenance programme and corrective maintenance activities, cf. [Section 12 of the Management Regulations](#).

Criteria shall be available for setting priorities with associated deadlines for carrying out the individual maintenance activities. The criteria shall consider the classification as mentioned in [Section 46](#).

## **Section 49**

### **Maintenance effectiveness**

The maintenance effectiveness shall be systematically evaluated based on registered performance and technical condition data for facilities or parts thereof.

The evaluation shall be used for continuous improvement of the maintenance programme, cf. [Section 23 of the Management Regulations](#).

## **Section 50**

### **Special requirements for technical condition monitoring of structures, maritime systems and pipeline systems**

Technical monitoring of new structures and maritime systems shall be carried out during their first year of service.

For new types of load-bearing structures, data shall be collected during two winter seasons to compare them with the design calculations, see [Section 17 of the Facilities Regulations](#).

When using facilities beyond their original design life, instrumentation of relevant structure sections shall be considered so as to measure any ageing effects.

When facilities are disposed of, the operator shall carry out studies of the structure's condition. The results shall be used to assess the safety of similar facilities.

On pipeline systems where fault modes may constitute an environmental or safety hazard, cf. [Section 46](#), inspections shall be carried out to monitor potential fault modes that may affect the integrity of the pipeline system.

The first inspection shall be performed after the maintenance programme as mentioned in [Section 47](#). The timing shall be based on the risk assessments performed, cf. [Section 46](#).

## Section 51

### **Specific requirements for testing of blowout preventer and other pressure control equipment**

The blowout preventer with associated valves and other pressure control equipment on the facility shall be pressure tested and function tested, cf. [Sections 45 and 47](#).

The blowout preventer with associated valves and other pressure control equipment on the facility shall undergo a complete overhaul and recertification every five years.

## CHAPTER X MONITORING THE EXTERNAL ENVIRONMENT

### Section 52

#### **General requirements to environmental monitoring**

The operator shall monitor the external environment, cf. the [Framework Regulations Section 48](#). Results from monitoring the external environment shall be reported to the Norwegian Environment Agency according to the [Management Regulations Section 34](#) litera a.

The monitoring shall be adapted to the existing pollution risk, be able to prove and map pollution of the external environment, and indicate development trends in the environmental condition.

The environmental monitoring of pollution from regular emissions and discharges shall include both benthic habitats (the sediments, soft and hard sea bed fauna) and the water column.

The operators shall cooperate on monitoring the external environment. As regards the monitoring of benthic habitats, the operators shall cooperate in regions as defined in [Guidelines for environmental monitoring of the petroleum activities offshore \(TA-2848/2011\) \(in Norwegian only\)](#).

Personnel with monitoring functions shall at all times be able to efficiently gather and process information from monitoring.

The operators shall, as part of the external monitoring, contribute to developing new methods for monitoring sediments, benthic fauna and water column.

The Norwegian Environment Agency can in, special cases, set additional requirements for monitoring beyond the prevailing guidelines.

### Section 53

#### **Baseline surveys**

To map the environmental status, the operator shall carry out baseline surveys

- a) before exploration drilling in new and previously unsurveyed exploration areas,
- b) before exploration drilling in areas where there are proven vulnerable environmental values (species and habitats), or where their existence is likely,
- c) before production drilling.

Baseline surveys of the sediments and relevant fauna elements on the seabed shall be performed in accordance with the [Guidelines for environmental monitoring of the petroleum activities offshore \(in Norwegian only\)](#). A baseline survey is valid for six years unless the Norwegian Environment Agency decides otherwise as far as duration is concerned.

### Section 54

#### **Environmental monitoring of benthic habitats**

Plans for environmental monitoring of benthic habitats (sediments, soft and hard sea bed fauna) shall be prepared in accordance with the [Guidelines for environmental monitoring of the petroleum activities offshore \(in Norwegian only\)](#) and shall be submitted to the Norwegian Environment Agency within 1 February of the year the monitoring will be carried out.

Studies in the individual region shall, as a rule, be carried out every three years. The surveys alternate between regions. The scope of monitoring shall be related to the shelf activity in the individual regions. Monitoring of new activity is in addition to, and shall be adapted to, existing monitoring.

The samples from the regional and field-specific stations shall be collected on the same trip. The regional stations shall describe the general background levels in the area for the examined components, and

function as references to an expected normal condition. The field-specific stations shall provide information on the condition surrounding the individual facilities in the regions.

Studies shall provide information on both the vertical and horizontal spread of relevant parameters.

The Norwegian Environment Agency can, in special cases, order other types of environmental surveys, and studies in other parts of the influence area, than those described in the *Guidelines for environmental monitoring of the petroleum activities offshore (in Norwegian only)*.

## **Section 55**

### **Environmental monitoring of the water column**

Plans for environmental monitoring of the water column shall be prepared in accordance with the *Guidelines for environmental monitoring of the petroleum activities offshore (in Norwegian only)*, and shall be submitted to the Norwegian Environment Agency by 1 April of the year the monitoring will be carried out.

The water column monitoring shall consist of monitoring in the field. The scope of the monitoring shall, as a minimum, include fish and mussel, and shall be carried out every three years. The monitoring shall document whether marine organisms from Norwegian waters are affected by pollution from the petroleum activities.

The period between two field-monitoring activities shall be used for further development and qualification of methods for future water column monitoring.

The Norwegian Environment Agency can, in special cases, order other types of environmental surveys, and studies in other parts of the influence area, than those described in the *Guidelines for environmental monitoring of the petroleum activities offshore (in Norwegian only)*.

## **Section 56**

### **Follow-up of monitoring results**

If the external environment monitoring shows significant deviations from the expected condition or development, the operator shall take measures to find the reason for the deviations. Such deviations shall be reported to the Norwegian Environment Agency as soon as possible.

## **Section 57**

### **Remote measuring of acute pollution**

The operator shall establish a remote measuring system that provides sufficient information to ensure that acute pollution from the facility is quickly discovered and mapped so that the amount and spread can be determined. The remote measurement system shall be seen in the context of regional remote measurement plans as mentioned in [Section 78](#) of these regulations.

## **Section 58**

### **Environmental surveys in the event of acute pollution**

Environmental surveys shall be carried out as soon as possible in the event of acute pollution to identify and describe damage to vulnerable resources in the open sea, along the coast and in the beach zone.

## **Section 59**

### **Characterisation of oil and condensate**

If oil or condensate is proven in connection with exploration activity, the oil or condensate shall be characterised as soon as possible.

Oil and condensate that can occur as acute pollution, shall be measured regularly as regards physical and chemical parameters. If such measurements show significant changes, a new characterisation shall be prepared.

The characterisation shall be carried out with particular emphasis on weathering properties and final destiny in a marine environment. The characterisation shall be adapted to the decision basis that is necessary at all times to reduce the risk, including efficient emergency preparedness development.



## **CHAPTER XI EMISSIONS AND DISCHARGES TO THE EXTERNAL ENVIRONMENT**

### **Section 60**

#### **Discharge of oily water**

Oily water shall be cleaned prior to discharge to sea. This does not apply to displacement water.

A treatment plant shall be operated with environmentally optimal effect regardless of whether the discharge limitations, cf. the third subsection, can also be met with reduced treatment effect. When evaluating what is the environmentally optimal effect, the degree of treatment shall be evaluated in relation to e.g. use of chemicals.

The oil content in water discharged to sea, shall be as low as possible, cf. [Chapter II of the Framework Regulations](#) and [Sections 7 and 8 of the Management Regulations](#). The oil content shall not exceed 30 mg oil per litre of water as a weighted average for one calendar month.

The operator shall obtain permission according to [Chapter 3 of the Pollution Control Act \(in Norwegian only\)](#) for injection of oily water.

### **Section 61**

#### **Emissions to air**

The operator shall have permission for emissions according to [Chapter 3 of the Pollution Control Act \(in Norwegian only\)](#).

### **Section 62**

#### **Ecotoxicological testing of chemicals**

The operator shall ensure that chemicals used in or discharged from the petroleum activities on the continental shelf, are tested as regards inherent ecotoxicological properties. Ecotoxicological testing of chemicals shall be performed at laboratories that are approved in accordance with the OECD's principles for good laboratory practice (GLP).

Ecotoxicological documentation in the form of OSPAR Harmonised Offshore Chemical Notification Format (HOCNF) shall be available for all chemicals that are used. The requirement does not apply to lubricants that are not discharged and chemicals in closed systems with a consumption of less than 3000 kg per facility per year, additive packages in chemicals in closed systems as well as laboratory chemicals, dispersants and beach-cleaning agents for combatting acute pollution and new chemicals during the period of field testing. For substances on OSPAR's PLONOR list, HOCNF parts 1 and 3 shall be completed.

Ecotoxicological properties shall be tested in accordance with the following:

#### 1) Biodegradability

Chemicals that consist of several substances shall be tested for the individual organic substances' biodegradability. If possible, the substances shall be tested in accordance with the seawater test OECD 306 "Biodegradability in Seawater". If OECD 306 cannot be used, one of the following seawater tests shall be carried out:

- marine BODIS test (for insoluble substances) modified ISO 10708

If alternative testing methods are planned for substances that are known to be toxic to microorganisms (e.g. biocides), the Norwegian Environment Agency shall be contacted.

For substances that are moderately degradable (corresponding to biodegradability BOD<sub>28</sub> between 20% and 60%), the properties of the degradation products shall also be evaluated.

#### 2) Bioaccumulation

Chemicals that consist of several substances shall be tested for the individual organic substances' potential for bioaccumulation. The requirement applies to substances with molecular weight lower than 700 g/mol. The substances shall be tested according to OECD 117 "Partition Coefficient (n-octanol/water), High Performance Liquid Chromatography (HPLC) Method" or OECD 107 "Partition Coefficient (n-octanol/water): Shake Flask Method". For substances that cannot be tested according to standardised methods, such as surface-active agents, a calculation or professional evaluation of bioaccumulation potential

shall be carried out. Professional evaluations shall preferably be carried out by an independent party, and shall be documented.

### 3) Acute toxicity

Inorganic and organic chemicals shall be tested for acute toxicity at the substance level. The requirement does not apply to chemicals on OSPAR's PLONOR list.

The following toxicity tests are required:

- Skeletonema costatum, ISO 10253
- Acartia tonsa, ISO 14669
- Scophtalmus maximus; Part B of OSPAR Protocols on Methods for the Testing of Chemicals Used in the Offshore Oil Industry, 2006. Cyprinodon variegatus is accepted as an alternative fish species.
- Corophium sp; Part A of OSPAR Protocols on Methods for the Testing of Chemicals Used in the Offshore Oil Industry (reference number: 2005-11 (a revised version of agreement 1995-07)).

Toxicity tests on freshwater organisms can be accepted if results from marine tests are not available, and if they are conducted according to standardised methods.

Fish tests are not required if the chemical is

- non-organic and has a toxicity in relation to other test organisms of EC50 or LC50  $\leq$  1 mg/l
- organic and has a toxicity in relation to the other test organisms of EC50 or LC50  $\leq$  10 mg/l.

## Section 63

### Categorisation of chemicals

The operator shall classify the chemicals based on the substances' properties. The requirement applies for all chemicals with a requirement for ecotoxicological documentation in the form of HOCNF.

The chemicals shall be divided into the following categories:

#### 1) Black category

The black category includes substances that appear on the following lists:

- The priority list from Storting White Paper No. 21 (2004-2005).
- The OSPAR List of Chemicals for Priority Action, cf. OSPAR Strategy with regard to Hazardous Substances

In addition, substances with the following ecotoxicological properties are classified as black:

- Substances with both a biodegradability of BOD28  $<$  20 % and bioaccumulation potential of Log Pow  $\geq$  5.
- Substances with both a biodegradability of BOD28  $<$  20 % and that are toxic (LC50 or EC50  $\leq$  10mg/l)
- Substances that are harmful in a mutagenic or reproductive manner.

#### 2) Red category

The red category includes substances with the following ecotoxicological properties:

- Non-organic substances that are acutely toxic (EC50 or LC50  $\leq$  1 mg/l)
- Organic substances with biodegradability BOD28  $<$  20%
- Organic substances or compound substances that meet two of the three following criteria:
  - Biodegradability, BOD28  $<$  60% or
  - Bioaccumulation potential, Log Pow  $\geq$  3 and molecular weight  $<$  700 or
  - Acute toxicity, LC50 or EC50  $\leq$  10 mg/l

#### 3) Yellow category

The yellow category includes substances that, based on their innate properties, are not defined as red or black, and which do not appear on OSPAR's PLONOR list.

#### 4) Green category

The green category includes

- substances on OSPAR's PLONOR list
- substances on the REACH list Appendix IV

## **Section 64**

### **Environmental assessments**

The operator shall carry out comprehensive evaluations of the chemicals' potential for environmental damage, based on the chemicals' innate properties, quantities, time and location of discharge, as well as other factors of significance. The assessments shall be carried out

- before new chemicals are used
- when entering into chemicals contracts
- as a minimum every three years for chemicals in the green and yellow categories
- as a minimum annually for chemicals in the red and black categories

The environmental assessments shall be documented.

The operator shall have special plans for substitution of chemicals in the red and black categories. The plans shall provide an overview of which chemicals are prioritised for replacement and when this can take place. The plans shall be reported annually to the Norwegian Environment Agency in accordance with applicable reporting requirements. The requirement also applies for chemicals in the yellow category with decomposition products that are considered to be environmentally harmful.

## **Section 65**

### **Choice of chemicals**

The operator shall select those chemicals that, according to the environmental assessments, result in the lowest risk of environmental damage. Chemicals in the black and red categories shall only be selected if they are necessary for technical and safety reasons.

## **Section 66**

### **Use and discharge of chemicals**

The operator shall obtain a permit in accordance with Chapter 3 of the [Pollution Control Act \(in Norwegian only\)](#) to use and discharge chemicals and to inject chemicals and water containing chemicals.

Unused chemicals shall not be discharged to sea, cf. the [Pollution Regulations, Chapter 22 \(in Norwegian only\)](#) regarding dredging and dumping in the sea and river systems.

Chemicals shall be stored in a prudent manner.

Use and discharge of chemicals shall be reduced to the extent possible.

The operator shall use chemicals with the lowest possible content of pollutants.

Field testing of chemicals that are alternatives to chemicals included in the permit pursuant to the [Pollution Control Act \(in Norwegian only\)](#), or testing of chemicals within new areas of use that are not included in the permit, is allowed. Such field testing shall not last longer than 14 days, while at the same time the total consumption shall not exceed 50 kg of substances assumed to be in the red category. Chemicals assumed to be in the black category and trace substances shall not be tested in the field.

When evaluating the date and time to discharge large quantities of water containing chemicals from pipelines, relevant expertise shall be consulted.

## **Section 67**

### **Emergency preparedness chemicals**

If the operator plans to keep chemicals in preparedness for safety reasons, an overview of these shall be prepared. The operator shall also have guidelines for when the emergency preparedness chemicals will be used, and what quantities can be used. The guidelines shall be based on risk analyses, cf. [Chapter V of the Management Regulations](#).

## **Section 68**

### **Discharge of cuttings, sand and solid particles**

Cuttings from drilling and well activities, sand and other solid particles shall not be discharged to sea if the content of formation oil, other oil or base fluid in organic drilling fluid exceeds ten grams per kilo of dry mass.

The operator shall obtain a permit pursuant to Chapter 3 of the [Pollution Control Act \(in Norwegian only\)](#) to inject materials such as cuttings, sand and solid particles.

### **Section 69**

#### **Discharge from formation testing and clean-up of wells**

Oil or oily water from well testing or well clean-up shall not be discharged to sea, unless the discharge is cleaned, cf. [Section 60](#). This does not apply during testing or clean-up of exploration wells from facilities without treatment plants. For such facilities, comprehensive assessments shall be carried out to ensure that the best environmental solution is selected.

Formation testing shall be carried out with the least possible strain on the external environment. Flaring of hydrocarbons shall be avoided to the extent practically possible.

The operator shall obtain a permit pursuant to Chapter 3 of the [Pollution Control Act \(in Norwegian only\)](#) to inject the well stream.

### **Section 70**

#### **Measuring the discharged quantity of oil, other substances and water**

The content of oil and other substances in the discharges shall be measured. Other substances means substances for which reporting requirements are set, cf. the Norwegian Environment Agency's [Guidelines for reporting from the petroleum activities offshore \(in Norwegian only\)](#). The test results shall be used to verify the treatment plant's performance.

The measurement frequency, discharge parameters and measurement methods shall be described in a measurement programme.

The measurement programme shall be established such that the scope of measurements is sufficient for the purpose, to ensure representative and comparable measurements.

Analyses shall be carried out in a systematic and standardised manner. The oil content of water shall be analysed according to OSPAR's reference method for determining dispersed oil in water (OSPAR ref. No. 2005-15, which is a modification of ISO 9377-2) or analysis methods calibrated towards this.

For drainage water, displacement water and injected oily water, the amount of water and content of oil shall be measured, calculated or estimated.

### **Section 71**

#### **Measuring associated fluids discharged with solids**

The responsible party shall measure the amounts of organic drilling fluid and oil discharged with solids.

## **CHAPTER XII WASTE**

### **Section 72**

#### **Waste**

The operator shall to the extent possible avoid generating waste.

The waste generated in connection with the activities shall be handled in a prudent environmental and hygienic manner.

Waste oil can be added to the production flow. The operator shall obtain a permit pursuant to Chapter 5 of the [Pollution Control Act \(in Norwegian only\)](#) to inject waste oil.

Solid waste shall not be thrown overboard. The operator shall prepare a waste management plan.

## **CHAPTER XIII EMERGENCY PREPAREDNESS**

### **Section 73**

#### **Establishment of emergency preparedness**

The operator or the party responsible for operating a facility shall prepare a strategy for emergency preparedness against hazard and accident situations, cf. also [Section 9](#) litera c. The emergency preparedness shall be established on the basis of results from risk and emergency preparedness analyses as mentioned in [Section 17 of the Management Regulations](#) and the defined hazard and accident situations and barrier performance requirements, cf. [Section 5 of the Management Regulations](#).

The emergency preparedness against acute pollution shall cover the ocean, coast and beach zones. In sufficient time before the planned start of an activity that can result in pollution or the risk of pollution, the operator shall submit the results from the environmental risk and emergency preparedness analyses, cf. [Section 17 of the Management Regulations](#), as well as a description, based on the performed environmental risk and emergency preparedness analyses, of how the planned emergency preparedness against acute pollution is safeguarded. Where the emergency preparedness is related to activities as mentioned in [Section 25 of the Management Regulations](#), [Section 26 of the Management Regulations](#) applies.

The Norwegian Environment Agency can, in special cases, set more detailed requirements for establishing this emergency preparedness.

### **Section 74**

#### **Shared use of emergency preparedness resources**

When cooperating on shared use of different operators' emergency preparedness resources as mentioned in [Section 21, second subsection of the Framework Regulations](#), the cooperation shall be regulated by agreement and the emergency preparedness based on area emergency preparedness analyses, cf. also [Section 78](#) of these regulations.

When using vessels and mobile facilities registered in a national ship register, the operator shall coordinate its own and the contractor's emergency preparedness plans, cf. [Section 20, first subsection of the Framework Regulations](#).

The operator shall ensure that the emergency preparedness is coordinated with the public rescue service, the rest of the national health and care service and municipal emergency preparedness in accordance with the [Public Health Act Section 28](#) (in Norwegian only), so that the chain of action for rescued, ill or injured personnel is coherent and professionally sound, cf. [Section 20, second subsection of the Framework Regulations](#).

### **Section 75**

#### **Emergency preparedness organisation**

The emergency preparedness organisation shall be robust, so that it is able to handle hazard and accident situations in an efficient manner.

In the event of acute pollution, the emergency preparedness organisation shall establish necessary functions so as to effectively carry out actions against acute pollution.

### **Section 76**

#### **Emergency preparedness plans**

Emergency preparedness plans shall be established that at all times describe the emergency preparedness and contain action plans for the defined hazard and accident situations.

### **Section 77**

#### **Handling hazard and accident situations**

The responsible party shall ensure that necessary measures are taken as soon as possible during hazard and accident situations so that

- a) the right notification is given immediately, cf. also [Section 18 of the Facilities Regulations](#) and [Section 57 of the Activities Regulations](#),

- b) hazardous situations do not develop into accident situations. In the event of accident situations, response measures shall be implemented. Response measures to limit acute pollution shall be implemented as close to the emission source as possible,
- c) personnel can be rescued during accident situations, cf. also [Section 41 of the Facilities Regulations](#),
- d) the personnel on the facility can be evacuated quickly and efficiently at all times, cf. also [Section 44 of the Facilities Regulations](#),
- e) the condition can be normalised when the development of a hazard and accident situation has been stopped, e.g. through monitoring and clean-up of the pollution and restoring the environment, thereby restoring the condition to its state before the hazard and accident situation. Criteria shall be set for normalisation of the external environment.

## **Section 78**

### **Regional preparedness for acute pollution**

The regional emergency preparedness against acute pollution as mentioned in [Section 21 of the Framework Regulations](#), shall be regulated by agreement and at all times handle and be updated in relation to the environmental risk from the facilities in the region.

Regional plans shall be established for remote measurement of acute pollution on the open sea, along the coast and in the beach zone. The operators shall contribute to further development of relevant remote measurement tools.

In the event of new activities, the operator shall, if necessary, implement measures in relation to the regional emergency preparedness to ensure the activity does not entail unacceptable risk.

## **Section 79**

### **Action against acute pollution**

In the event of action against acute pollution, a plan for conducting the action shall be prepared as soon as possible. The first version of the plan shall be available no later than one hour after the action management has been established. The plan shall be submitted to the National Coastal Administration and shall be updated regularly throughout the action's phases.

The action shall not be concluded before the targets mentioned in [Section 76](#) have been reached, and this has been documented.

## **CHAPTER XIV COMMUNICATION**

### **Section 80**

#### **Communication**

It shall be ensured that necessary internal and external notification and communication is safeguarded at all times during installation and operation, and during hazard and accident situations, cf. [Sections 18 and 19 of the Facilities Regulations](#).

A person shall be designated on board to be responsible for the communication systems on manned facilities.

## **CHAPTER XV DRILLING AND WELL ACTIVITIES**

### **Section 81**

#### **Well programme**

Prior to starting well activities, a programme shall be prepared that describes the individual activities to be carried out and the equipment to be used, cf. also [Section 10 of the Facilities Regulations](#).

The programme shall be updated as mentioned in [Section 20](#), second subsection litera b.

## **Section 82**

### **Well location and wellbore**

The well location and wellbore shall be known at all times and selected based on well parameters of significance for a safe drilling and well activity. It shall be possible to drill a relief well from two alternative locations. The locations shall be mapped and known in advance, cf. also [Section 28](#).

If the distance to adjacent wells is less than the defined minimum distance, restrictions shall be set, cf. [Section 28](#), second subsection.

## **Section 83**

### **Shallow gas and shallow formation fluids**

The responsible party shall ensure that necessary measures are planned and can be implemented to handle situations with shallow gas or other formation fluids, cf. also [Section 82](#).

When drilling in shallow formations, the selection of well structure and drilling parameters shall prevent gas or formation fluid from the well posing a threat to personnel and facility.

## **Section 84**

### **Monitoring well parameters**

During all drilling and well activities, drilling and well data shall be monitored and collected to verify the well prognoses, so that necessary measures can be implemented and the well programme adjusted if necessary.

## **Section 85**

### **Well barriers**

During drilling and well activities, there shall be tested well barriers with sufficient independence, cf. also [Section 48 of the Facilities Regulations](#).

If a barrier fails, activities shall not be carried out in the well other than those intended to restore the barrier.

There shall be pumping and fluid capacity available on the facility or on vessels in the event of heavy well intervention. The need for pumping and fluid capacity in the event of light well intervention shall be included in the activity-specific risk assessment.

When handing over wells, the barrier status shall be tested, verified and documented.

## **Section 86**

### **Well control**

In the event of loss of well control, it shall be possible to regain well control by intervening directly or by drilling a relief well.

An action plan shall be prepared that describes how the lost well control can be regained.

## **Section 87**

### **Controlled well stream**

Operational restrictions shall be set for controlled well stream.

## **Section 88**

### **Securing wells**

All wells shall be secured before they are abandoned so that well integrity is safeguarded during the time they are abandoned, cf. [Section 48 of the Facilities Regulations](#). For subsea-completed wells, well integrity shall be monitored if the plan is to abandon the wells for more than twelve months.

Exploration wells commenced after 1.1.2014 shall not be temporarily abandoned beyond two years. In production wells abandoned after 1.1.2014, hydrocarbon-bearing zones shall be plugged and abandoned permanently within three years if the well is not continuously monitored.

It shall be possible to check well integrity in the event of reconnection on temporarily abandoned wells. Abandonment of radioactive sources in the well shall not be planned. If the radioactive source cannot be removed, it shall be abandoned in a prudent manner.

### **Section 89**

#### **Remote operation of pipes and work strings**

Remotely operated systems shall be used for handling pipes and work strings, cf. [Section 33](#) and [Section 69 of the Facilities Regulations](#).

Limitations shall be set for the personnel's access to the work area for remotely controlled systems.

There shall be visual contact and radio communication between personnel when using remotely operated pipe handling, cf. [Section 92](#), second subsection.

## **CHAPTER XVI MARITIME OPERATIONS**

### **Section 90**

#### **Positioning**

When carrying out maritime operations, the responsible party shall implement necessary measures so that those who participate in the operations, are not injured, and so that the likelihood of hazard and accident situations is reduced.

Requirements shall be set for maintaining the position of vessels and facilities when conducting such operations, and criteria shall be set for start-up and interruption, cf. [Section 63 of the Facilities Regulations](#).

## **CHAPTER XVII ELECTRICAL INSTALLATIONS**

### **Section 91**

#### **Work on and operation of electrical installations**

During live work, work near live installations, work in or near earthed and short-circuited installations and during operation of low and high voltage installations, necessary measures shall be implemented to prevent injury to those who carry out the work, and to reduce the likelihood of hazard and accident situations.

The responsible party shall designate a person with responsibility for the electrical facilities.

## **CHAPTER XVIII LIFTING OPERATIONS**

### **Section 92**

#### **Lifting Operations**

Lifting operations shall be cleared, managed and conducted in a prudent manner, e.g. it shall be ensured that personnel do not come under suspended loads, cf. [Section 30](#). Cf. also [Chapter VII](#) and [Section 43](#).

Everyone participating in lifting operations shall have a radio for communication, cf. [Section 18 of the Facilities Regulations](#), and the radio shall be used unless everyone involved can communicate clearly with each other through direct speech. The responsible party shall ensure that all communication takes place in a clear and concise manner and without disturbances.

The responsible party shall also ensure that the facility's management individually approves lifting operations involving personnel transport if offshore cranes are used for such lifting operations.



## **CHAPTER XIX MANNED UNDERWATER OPERATIONS**

### **Section 93**

#### **Manned underwater operations**

When conducting manned underwater operations, operational measures shall be implemented to prevent those participating from being subjected to injury or illness, and to reduce the likelihood of mistakes that can lead to hazard and accident situations. Cf. [Chapter VII](#).

### **Section 94**

#### **Time limit provisions**

The following time limit provisions shall apply when conducting manned subsea operations:

- a) stays at working depth:  
in the case of diving down to 180 metres, the stay at working depth shall not exceed 14 days. With regard to deeper diving, the stay at working depth shall not exceed ten days,
- b) time between saturation periods:  
the time between saturation periods shall at least equal the duration of the previous saturation period. With regard to diving deeper than 180 metres, the time between saturation periods shall be at least twice that of the previous saturation period,
- c) bell run:  
in the case of diving down to 180 metres, the bell run shall not exceed eight hours. With regard to deeper diving, the bell run shall not exceed six hours. If the divers stay dry in a subsea chamber, the bell run can be extended to eight hours. The timing of a bell run begins when the clamp between the bell and the chamber is first loosened and ends when the clamp is reconnected, ready for pressure equalisation and final transfer of the divers back to the chamber complex.
- d) time in water:  
in the case of diving down to 180 metres, the divers shall not stay in the water for more than four hours over a twelve-hour period. With regard to a three-man bell run, the time in the water can be extended to six hours provided
  - 1) the diver returns to the diving bell in the course of the third or fourth working hour in water for least a 30-minute break with the diving helmet off. Breaks in the bell shall be logged,
  - 2) the diver has a "dry day" as a back-up diver in the bell at least every three days. With regard to diving deeper than 180 metres, the diver shall not stay in the water for more than three hours over a twelve-hour period,
- e) use of breathing mask:  
after a maximum of four hours, divers using a breathing mask in the subsea chamber shall have a break in an atmosphere where use of a breathing mask is not necessary,
- f) recompression following subsea operations:  
after a completed saturation period, the divers shall have immediate access to therapeutic recompression for at least 24 hours following completed decompression. In the case of surface-oriented diving, the divers shall have immediate access to therapeutic recompression of at least 12 hours after completed decompression,
- g) work-free period during work under increased pressure:  
divers working in water or who work under increased ambient pressure, shall, over a 24-hour period, have a continuous work-free period of at least 12 hours. Work and rest periods shall be specified in a shift programme and shall be planned at regular hours,
- h) surface personnel in direct communication with divers in the water: the surface personnel in direct communication with divers in the water shall not perform this function for more than four hours consecutively without a break. The total time in this function shall be limited upward to eight hours over a twelve-hour period.

**CHAPTER XX**  
**CONCLUDING PROVISIONS**

**Section 95**

**Supervision, decisions, enforcement etc.**

[Chapter IX of the Framework Regulations](#) applies correspondingly to these regulations.

**Section 96**

**Entry into force**

The Regulations will enter into force on 1 January 2011. At this time, the Regulations relating to conduct of activities in the petroleum activities of 3 September 2001 No. 1157 will be repealed.