


SO – Head Quarters						
1	02.07.2002	Publish	NPD and HSE acknowledgement	RUNPALLE	TORGRAN	HARBRATT
1a	24.05.2002	Draft	NPD and HSE review	RUNPALLE		
Rev.	Date	Status	Reason for issue	Prep.	Checked	Approved
			Title: Regulatory requirement project 2001-2002 (NPD vs. HSE)			
Doc.fam.: Administrative documents			Document no.: SO-0101-2001-RE-00055			
Doc.type.: Report						
Contract no.:			Orginator: Smedvig Offshore AS v/Rune Pallesen & Tor-Inge Gran			
Shredding:						
Pages: 35						

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PREFACE

Petroleum activities in the North Sea have developed a lot since the first years and so has the regulatory requirements on both sides of the ocean. The major accidents of Alexander Kielland and Piper Alpha led to great changes in the regulations and in many ways form basis for the safety level obtained today.

However, the regulatory regimes of the Norwegian Petroleum Directorate (NPD) and the Health and Safety Executive (HSE) are different in several areas hence creating additional work and sometimes also confusion for mobile offshore drilling units (MODUs) moving from one regime to the other. The HSE requires an accepted Safety Case whilst in the new NPD regulation (entered in to force January 1st 2002) an Acknowledgement of Compliance (AoC) is introduced. Even though a lot of the requirements for a Safety Case and an AoC are common or similar there is little or no effect in having one when needing the other.

West Navion is the perfect example. The West Navion is one of the first units of its kind to combine ultra deepwater capabilities with enhanced drilling efficiency and designed for operation in water depths up to 2500 metres (8200 ft). The unit was designed and built for the harsh environment of the North Sea area and in compliance with NPD and Norwegian Maritime Directorate (NMD) regulations and DNV class rules.

West Navion was the first installation to obtain an accepted AoC from the NPD. The drill ship started operation in Norwegian territory on February 26th 2000.

Approximately a year later the West Navion entered UK territory. Prior to this Smedvig had to prepare a Safety Case for West Navion from square one. No credit was given for the AoC or the work related to it.

Based on this the NPD and the HSE in companionship has asked Smedvig to perform a study to find and analyse gaps between relevant requirements for a Safety Case and an AoC and to recommend follow-up both in a short and a long term perspective. In short term we aim to increase predictability and reduce the need for duplicate work in connection with change of territory. The long term goal is to form basis for either a complete joint regulatory scheme or a common Safety Case or AoC between the countries surrounding the North Sea.

Thanks to NPD, HSE, IADC and DNV for their contribution during this project.

The project has been performed by Rune Pallesen and Tor-Inge Gran, both with a M.Sc. in offshore safety technique and employed by Smedvig Offshore AS.

TABLE OF CONTENTS

PREFACE	2
1.0 PURPOSE	5
2.0 FUNCTION	5
3.0 SCOPE	5
4.0 RESPONSIBILITY	5
4.1 RESPONSIBILITY FOR THE CONTENT	5
4.2 RESPONSIBILITY FOR IMPLEMENTATION	5
5.0 GENERAL	6
5.1 BACKGROUND	6
5.1.1 <i>West Navion</i>	6
5.1.2 <i>Industry requirements</i>	6
5.1.3 <i>Stortingsmelding nr.7 concerning SHE</i>	6
5.1.4 <i>NPD regulations</i>	7
5.1.5 <i>UK regulations</i>	7
5.1.6 <i>Inter-Governmental Co-operation</i>	8
5.2 OBJECTIVES	9
5.3 TERMS AND CONDITIONS	10
5.3.1 <i>NPD Regulations</i>	10
5.3.2 <i>HSE Regulations</i>	11
5.4 PLAN.....	11
6.0 COMPARISON STUDY	12
6.1 GENERAL	12
6.2 SMEDVIG EXPERIENCE	14
6.3 THE STUDY	15
6.4 SUMMARY	15
7.0 RESULTS	17
7.1 DISCUSSION	17
7.1.1 <i>Areas with gap between NPD and HSE requirements</i>	17
7.1.2 <i>Areas with gap between HSE and NPD requirements</i>	17
7.1.3 <i>Relevant parallel projects</i>	17
7.2 RECOMMENDATIONS.....	18
7.3 FOLLOW-UP	18
7.3.1 <i>Short-term</i>	18
7.3.2 <i>Long term</i>	19
8.0 DEFINITIONS & ABBREVIATIONS	19
9.0 REFERENCES	20

10.0 APPENDICES	21
APPENDIX 1 PROJECT PLAN	21
APPENDIX 2 MATRIX NPD FRAMEWORK HSE REGULATION.....	22
APPENDIX 3 MATRIX NPD MANAGEMENT REGULATION.....	23
APPENDIX 4 MATRIX NPD ACTIVITY REGULATION.....	24
APPENDIX 5 MATRIX NPD FACILITY REGULATION.....	25
APPENDIX 6 MATRIX NPD INFORMATION DUTY REGULATION	26
APPENDIX 7 MATRIX HSE SAFETY CASE REGULATIONS (SCR)	27
APPENDIX 8 MATRIX HSE DESIGN & CONSTRUCTION REGULATIONS (DCR)	28
APPENDIX 9 MATRIX HSE PREVENTION OF FIRE & EXPLOSION AND EMERGENCY RESPONSE REGULATIONS (PFEER).....	29
APPENDIX 10 MATRIX HSE MANAGEMENT & ADMINISTRATION REGULATIONS (MAR)	30
APPENDIX 11 MATRIX HSE PIPELINE SAFETY REGULATIONS (PSR)	31
APPENDIX 12 MATRIX HSE PROVISION AND USE OF WORK EQUIPMENT REGULATIONS (PUWER)	32
APPENDIX 13 IDENTIFIED GAPS FROM THE NPD REGULATIONS.....	33
APPENDIX 14 IDENTIFIED GAPS FROM THE HSE REGULATIONS	34

1.0 PURPOSE

This report shall describe the results of a comparison study of regulatory requirements related to the UK Safety Case and the Norwegian Acknowledgement of Compliance (AoC).

2.0 FUNCTION

This report shall document scope, objectives, results and recommendations of the comparison study.

3.0 SCOPE

This project was initiated by and prepared on behalf of the Norwegian Petroleum Directorate (NPD) and the UK Health and Safety Executive (HSE). Smedvig Offshore AS (SO) was given responsibility for performing the project.

4.0 RESPONSIBILITY

4.1 Responsibility for the content

SO Manager Q&HSE is responsible for the contents of this report. The report shall not be changed without his approval. The NPD and the HSE acknowledge the report.

4.2 Responsibility for implementation

The NPD and the HSE are responsible for appropriate follow-up of the report.

5.0 GENERAL

5.1 Background

5.1.1 West Navion

West Navion was the first installation to receive an AoC from the NPD. The drill ship started operation in Norwegian territory on February 26th 2000. A year later the West Navion entered UK territory. Prior to this Smedvig had to prepare a Safety Case for West Navion. No credit was given for the AoC and the Safety Case had to be compiled in its totality from scratch. The Safety Case was accepted by the HSE on March 7th 2001.

5.1.2 Industry requirements

During the eighties and the nineties the petroleum industry has been a pioneer in terms of Safety, Health & Environment (SHE) in Norway. The industry has been a front runner when it comes to safety and working environment and in many ways a model for onshore enterprises. Labour organisations have played an important part in this work. The SHE development during the nineties, however, was marked by the changes in the way oil companies planned and performed the enterprise, i.e. due to profitability demands. The reduction of oil price in 1997-1998 enhanced the development.

It was presupposed both from the industry and the government that the changes would not be at the expense of health, safety or the environment. However the last couple of years different parties have pointed out this to be the case still.

Seemingly there have not been improvements with regards to health, safety and the environment in the petroleum industry the last couple of years. Some areas even show a negative trend. As a result of this the Ministry of Labour and Government Administration has prepared the "Stortingsmelding nr.7 (2001-2002)" concerning health, safety and the environment in the petroleum industry.

5.1.3 Stortingsmelding nr.7 concerning SHE

The Ministry wanted to emphasise the expectations to SHE in regards to planning, decisions and execution of work in the industry. The report highlights unsatisfactory trends, recommended actions and primary responsibility for follow up. Goals for the further development of SHE are

clarified and the industry and the governments are made accountable in terms of the requirement for continuous improvement.

5.1.4 NPD regulations

Acknowledgement of Compliance (AoC)

The purpose of the AoC arrangement is to contribute to increased predictability for the industry's participants concerning a mobile drilling unit's suitability for activities on the Norwegian Continental Shelf (NCS), measured against the legal requirements for safety and working environment. Furthermore, the arrangement shall provide for efficient processes for the applicants, operators and authorities in connection with application for consent to undertake petroleum activities on the NCS when a mobile drilling unit that carries an AoC is planned to be used.

An application for AoC is a request for the authorities' statement related to a specific mobile drilling unit's technical condition and the applicant's organisation and management system, measured against the legal requirements that apply for a future use of such unit on the NCS.

The AoC is given on basis of the authorities' assessment of the above. Use of such statement in connection with a later application for consent, must be seen in the context of changes in the unit's technical condition, the applicant's organisation and management system, after the statement was given.

An AoC is a guiding statement from NPD that the technical condition of a mobile drilling unit, the applicant's organisation and management system, to the best judgement is considered to be in compliance with relevant requirements in Norwegian petroleum legislation.

5.1.5 UK regulations

All UK Offshore Regulations underpin the Principal piece of legislation, which is the Health and Safety at Work etc. Act 1974. This cover work activities both onshore and offshore. The application of the regulations offshore is through the "Application Outside Great Britain Order 2001".

Application of this order means in effect that "all" relevant onshore legislation is also applicable offshore, i.e. Regulations governing the use of scaffolding, the Electricity at Work Regulations etc.

The UK is a member of the European Common Market. Hence Directives must be incorporated into domestic legislation, e.g. "The Working Time Directive", "Workplace health, Safety and Welfare Regulations 1992", "Personal Protective equipment at Work Regulations 1992", "Management of

Health and Safety at Work Regulations 1992, amended 1999” and “Display Screen Regulations 1992”.

Underpinning the Regulations there are published “Approved Codes of Practice” covering various topics, which if followed will go a long way in complying with the relevant Regulations.

Further, the HSE and/or Industry Guidance is published, e.g. guidance on “The safe isolation of plant and equipment” Published by the Oil Industry Advisory Committee (OIAC).

In addition, the HSE publishes Operations Notices (ON) and Safety Notices (SN) which cover industry wide general topics. ONs will give information on the notifications required covering Rig Moves. SNs similar to Safety Flashes or Safety Alerts will give guidance, notification and advice following an incident.

Safety Case regulations

Safety Cases are required for all fixed and mobile installations operating, or to be operated, in UK designated areas of its continental shelf.

For mobile installations, the owner is required to submit a Safety Case before moving the installation in UK waters and designated areas for the purpose of operating there.

The primary aim of the Safety Case Regulations (SCR) is to describe how risks from major accident hazards to the health and safety of the work force employed on offshore installations or in connected activities will be reduced to levels as low as reasonably practicable (‘ALARP’), and to demonstrate that an adequate management system is in place to secure compliance with all other relevant statutory provisions. The SCR implement the central recommendation of Lord Cullen’s report on the public inquiry into the Piper Alpha disaster, in which it is stated that the operator or owner of every offshore installation should be required to prepare a Safety Case, and submit it to HSE for acceptance.

The Safety Case regime and the environment

In line with Lord Cullen’s recommendations, the primary purpose of the regulatory regime is to reduce risks to the offshore workforce (i.e. ALARP). The SCR do not deal with protection of the marine environment from the consequences of a major accident. However, requirements designed to safeguard the integrity of offshore installations and reduce the risks to the workforce from major accident hazards will also help to reduce threats to the marine environment from the accidental release of hydrocarbons.

5.1.6 Inter-Governmental Co-operation

The continental shelf underlying the North Sea is divided into six national sectors, adjoining Belgium, Denmark, Germany, The Netherlands, Norway and the United Kingdom. All except Belgium actively exploit the offshore hydrocarbon resources. National legislative regimes have been developed to supervise, monitor and control all exploration and exploitation activities within each sector.

There are different sets of national legislation and different authorities regulating offshore petroleum activities. With different administrative requirements to satisfy, many organisations find it demanding each time they move their units from one part of the continental shelf to another.

Some years ago, the governmental agencies responsible for regulating the health and safety of the offshore oil and gas industry came together to form the North Sea Offshore Authorities Forum (NSOAF).

NSOAF MOU Working Group

The NSOAF established the MOU (Mobile Offshore Unit) Safety Case Working Group in 1992. The primary objective was to develop a mutual understanding of the law and assessment arrangements in each nation, with a view to ensuring consistency in the "Safety Cases" submitted to the national authorities in each of the five producing countries.

The NSOAF has now expanded the remit of the working group to cover all operational matters with regard to the regulatory supervision of MOUs. This has led to an increasingly proactive approach in identifying and solving practical problems. To assist this an initial meeting with the IADC (International Association of Drilling Contractors) was held in September 1999 to commence discussions on ways of implementing the "single Safety Case" per unit concept, and the integration of the IMO International Safety Management Code into the Safety Case. Pursuing these issues with IADC is a key short-term objective for the MOU Working Group.

IADC has since then produced drafts for a North West European Health, Safety and Environment Case (NWE HSE CASE) Guidelines.

The comparison study described in this report aim to assist in terms of the practical use of the NWE HSE CASE.

5.2 Objectives

This project compares regulatory requirements from NPD and HSE to identify common requirements and evaluate gaps between the two regimes.

The main objective is to make the moving between the Norwegian and the UK continental shelf more predictable and to form basis for a common NWE HSE CASE.

5.3 Terms and conditions

The NPD and the HSE agreed to ask Smedvig to run the project as stated above.

The project should compare requirements covered by the AoC and the Safety Case respectively, identify gaps and recommend necessary steps towards a future common process to achieve a NWE HSE CASE.

Relevant regulatory requirements are identified in Table 1 below:

NPD	HSE
Framework HSE Regulations	Safety Case Regulations (SCR)
Activity Regulation	Design & Construction Regulations (DCR)
Facilities Regulation	Prevention of Fire & Explosion and Emergency Response Regulations (PFEER)
Management Regulation	Management & Administration Regulations (MAR)
Information Duty Regulation	Pipeline Safety Regulations (PSR)
	The Provision and Use of Work Equipment Regulations (PUWER)

Table 1

The selection of regulatory requirements are based on the following:

- 1) The five NPD regulations that form the basis for the AoC are used.
- 2a) The SCR form the basis for a Safety Case.
- 2b) The four other offshore regulations complete the offshore regulations.
- 2c) The PUWER was recognised as the most significant industry regulation in relation to this study.

5.3.1 NPD Regulations

Framework HSE Regulations

The purpose of these regulations is to

- a) further a high standard in relation to health, environment and safety in the petroleum activities,
- b) achieve a systematic implementation of measures to fulfil the requirements and reach the objectives set out in the legislation relating to health, environment and safety,
- c) further develop and improve the standard in relation to health, environment and safety.

Management Regulation

Regulations relating to management in the petroleum activities

Facilities Regulation

Regulations relating to design and outfitting of facilities etc. in the petroleum activities.

Activity Regulation

Regulations relating to conduct of activities in the petroleum activities.

Information Duty Regulation

Regulations relating to material and information in the petroleum activities.

5.3.2 HSE Regulations

Safety Case Regulations (SCR)

The primary aim of the SCR is to reduce the risks from major accident hazards to the health and safety of the work force employed on offshore installations or in connected activities.

Design and Construction Regulations (DCR)

DCR includes requirements for safeguarding the integrity of an installation throughout its life cycle, from design and construction, through operation and maintenance, to decommissioning and dismantlement.

Prevention of Fire and Explosion and Emergency Response Regulations (PFEER)

PFEER deals with measures to prevent fires and explosions on offshore installations, to protect people from the effects of any which do occur and to secure effective emergency response.

Management and Administration Regulations (MAR)

MAR has reformed the previous legal requirements relating to the management and administration of offshore installations and related activities.

Pipeline Safety Regulations (PSR)

PSR lays down duties on pipeline operators relating to the design, construction, operation, maintenance and decommissioning of pipelines.

The Provision and Use of Work Equipment Regulations (PUWER)

PUWER place duties on employers and others to ensure that work equipment does not adversely affect the health and safety of people.

5.4 Plan

The project plan includes an overview of the main activities and progress was tracked throughout the entire project. The plan is attached (Appendix 1).

6.0 COMPARISON STUDY

6.1 General

The study is divided in two parts:

1. Based on NPD regulations, to identify and evaluate compliance and gaps in HSE regulations.
2. Based on HSE regulations, to identify and evaluate compliance and gaps with NPD regulations.

The new NPD regulations that entered in to force January 1st 2002 are used as basis for the study.

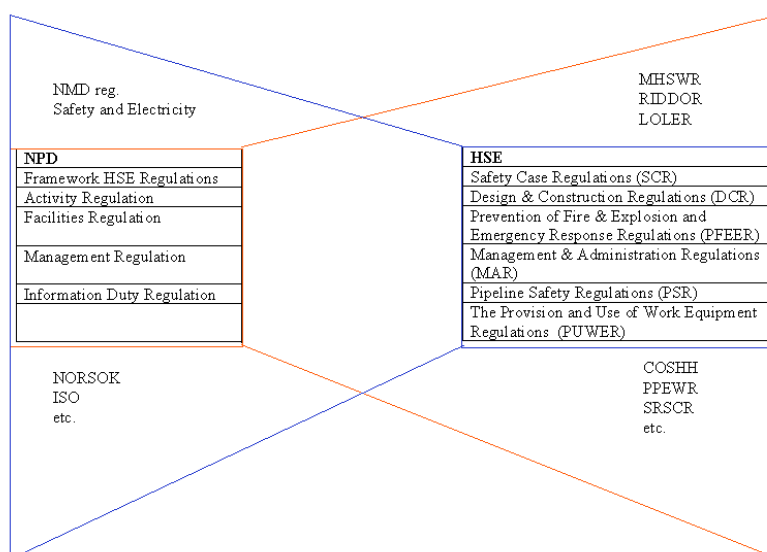
Relevant requirements and gaps are identified for each section in each regulation identified in Chapter 5.3. Identified gaps are evaluated and discussed in Chapter 7.

The study is an extensive exercise of comparing theory with theory in terms of two separate legislation regimes. A practical side has been sought added to this by focusing on the intention of each and every requirement.

The main objectives of the two regimes are the same. The essences of the regulatory requirements are also the same. However, the structure and approach used to obtain the objectives are different. During the study we have focused on the intention and the expectation behind each requirement.

In search of relevant regulatory requirements similar to those given in a section in many cases we had to go to other regulations than those stated in Chapter 5.3, Table 1.

This is illustrated by the figure below.



Regulatory focus

During the past two decades the regulations in both countries have turned from the traditional prescriptive and detailed requirements towards focusing on goal setting and functional requirement. However for several areas the requirements remain detailed.

Functional requirements simplify adjusting to requirements for the individual company with its organisation, management system and the technical conditions of the MODU in demand. Further there is a reduced demand for updating the regulations in relation to change of technology, work practice and industry demands.

Guidance to regulations issued/enforced by both NPD and HSE are to be perceived as a recommended practice. Following the guidance will normally be enough to comply with the regulations. However, following the guidance is not compulsory and the duty holder/owner is free to select other solutions.

The regulator's practice of granting exemptions has a significant impact on how goal setting and functional the regulations are in practice. A rigid practice of granting exemptions causes the regulations to be more detailed as the owner/duty holder's possibilities for choice of action are narrowed.

Common grounds

Common for the Safety Case and the AoC is that both represent at large a comparison of relevant regulations and a practical solution. Both the Safety Case and the AoC describe the management system and the MODU's operational and technical limits.

Differences

There is a different approach to the legislative part of the two regulatory schemes. When preparing an AoC, the main objective is to reveal, analyse and

evaluate exemptions, whilst when preparing a Safety Case, the focus is on describing and demonstrating regulatory compliance.

The Safety Case has a high degree of detailed description, whilst the AoC in a larger extent refer to supporting documentation.

Exemptions

The practice of granting exemptions differs between the regulators. Health, safety and environment as well as predictability for the duty holder /owner would benefit from a common practice.

In some cases a solution different from the one specified by regulation may be found to represent the same or a higher level of health, safety and environment. In such cases exemptions should be granted. Acceptance criteria, risk evaluation and compensating measures should form basis for evaluation of exemptions.

Regulations are goal setting and require the duty holder/owner to take appropriate measures; such measures will take into account the circumstances of the offshore installation. Nevertheless, there may be circumstances where it is necessary to apply the regulations flexibly. The exemption provision in the regulations provides that flexibility.

6.2 Smedvig experience

West Navion is one of the first units of its kind to combine ultra deepwater capabilities with enhanced drilling efficiency. The vessel is based on the new generation of Multipurpose Shuttle Tankers (MST) and is designed for operation in water depths up to 2500 metres (8200 ft) with potential of upgrade to 3000 metres (9,800 ft).



The unit was built for the harsh environment in the North Sea and according to Norwegian petroleum and flag regulations and DNV Class Rules. West Navion was the first installation to receive an AoC from the NPD. The drill ship started operation in Norwegian territory on February 26th 2000. A year later the West Navion entered UK territory. Prior to this Smedvig had to prepare a Safety Case for West Navion from square one. The Safety Case was accepted by the HSE on March 7th 2001.

For West Alpha an acceptance of the AoC was issued December 31st 2001 and the Safety Case was accepted on May 17th 2002.

For West Epsilon an AoC was submitted on January 18th 2002, a SAHD was submitted to the Dutch authority, SodM, October 12th 2001 and a Safety Case was submitted to the HSE February 2nd 2002. On December 17th 2001 West Epsilon was permitted to operate on the Dutch continental shelf.

6.3 The study

All of the relevant regulatory requirements identified in Chapter 5.3, Table 1 above was each made into separate matrixes. The study was then performed for each of the regulations looking at one section at a time, to find corresponding or equivalent requirements in the opposite regime. Whenever a gap was identified this is highlighted in the matrix with a comment.

During the study some sections were found to be not applicable (N/A) for the comparison of NPD and HSE regulations. The requirements in these sections are either operator related, onshore related or related/connected to the regime or validity of the regulation at hand.

Upon completion of all the matrixes, the identified gaps are discussed in Chapter 7.1 below.

The regulatory matrixes are attached (Appendices 2-12).

6.4 Summary

Gaps are identified by section in each regulation and are listed below. In chapter 7 each of the identified gap are discussed with a focus on the practical consequences related to it.

Areas with gap between NPD and HSE requirements

- Setting goals and measure all conditions relevant for HSE, incl. degree of goal attainment (Management §7-9)
- Identification of processes (Management §10)
- Working environment analysis (Management §16)

- Environmental risk analysis (Management §17)
- Disposition of deviations (Management §20)

- SHE culture (Framework HSE §11)
- Qualification of other participants (Framework HSE § 14)
- Use of language (Framework HSE §16)
- Co-ordination of emergency preparedness (Framework HSE §29-30)
- Safety manning in connection with work conflicts (Framework HSE §31)
- Surveillance of safety zone (Framework HSE §38)
- Principle enterprise (Framework HSE §44)
- Safety reps. right to stop dangerous work (Framework HSE §46)
- Working hours (Framework HSE §47-53)
- Minimum age (Framework HSE §54)

- Design (Facility §4)
- Alarm signals - Light and sound (Facility §17)
- Noise and vibration (Facility §22-23)
- Light (Facility §24)
- Emergency power / lighting (Facility §37)
- Ballast (Facility §38)
- Open drain (Facility §39)
- Drilling and well systems (Facility §47-51)
- Remote operation of pipes (Facility §55)
- Structure (Facility §57)
- Living quarters (Facility §59)
- Health department (Facility §60)
- Emergency hospital (Facility §61)
- Occupational hygiene and drinking water (Facility §62)
- Stability (Facility §63)
- Loading and discharge (Facility §67)
- Exhaust ducts (Facility §69)
- Marking of equipment and cargo (Facility §73)
- Aerosols (Facility §77)

- Control of health (Activity §4)
- Working hours (Activity §5)
- Doctor and educated nurse (Activity §6)
- Increase POB in special circumstances (Activity §17)
- Hand over (Activity §30)
- Testing of BOP (Activity §48)
- Testing and evaluation of chemicals (Activity §56)
- Remote operation of pipes (Activity §80)
- Positioning (Activity §81)
- Lifting operations (Activity §83)

- Information (Information duty §§1-4)

- Alert and Notification (Information duty §11)

Areas with gap between HSE and NPD requirements

- Safety Case for mobile installation (SCR reg 5)
- Safety Case for combined operation (SCR reg 6)
- Keeping of documents (SCR reg 15)
- Verification scheme - ICP (SCR reg 15A)
- ICP (SCR reg 15B)

- OIM (MAR reg 6)
- Restraint and putting ashore (MAR reg 7)
- Personnel records (MAR reg 9)
- HLO (MAR reg 13)

- Signal for toxic gas (PFEER Reg 11)

7.0 RESULTS

7.1 Discussion

7.1.1 Areas with gap between NPD and HSE requirements

The identified gaps are described in Appendix 13.

7.1.2 Areas with gap between HSE and NPD requirements

The identified gaps are described in Appendix 14.

7.1.3 Relevant parallel projects

The IADC has been working on a North West European HSE Case guideline.

The Guidelines have been developed to address the requirements of the:

- Extractive Industries Directive (EID) 92/91/EEC.
- UK & Norwegian regulatory requirements which, while being very similar to the EID requirements, have been derived from separate backgrounds.
- IMO's International Safety Management (ISM) Code.

This report may be used in relation to the NWE HSE Case guidelines as suggested in chapter 7.3.1 or as highlighted in the guidelines.

7.2 Recommendations

The main difference between an UK Safety Case and NPD's AoC is that the Safety Case describes regulatory compliance in details whilst the AoC describes regulatory exemptions. In the Safety Case, the provision of factual information; main demonstrations and analyses; and the identification of remedial measures demonstrate compliance.

Furthermore, the practice of granting exemptions differs between the regulators. Health, safety and environment as well as predictability for the duty holder/owner would benefit from a common practice.

In some cases a solution different from the required may be found to represent the same or better solution with regards to health, safety and environment. In such cases exemptions should be granted. Acceptance criteria, risk evaluation and compensating measures should form basis for evaluation of exemptions.

In some cases an exemption based on new technology or work methods may even contribute in improving the regulations.

It is recommended that exemptions are considered to be customary for a MODU and that in general applications for exemptions are not dismissed when evaluated and granted on the basis mentioned above.

7.3 Follow-up

7.3.1 Short-term

We recommend that a change of territory is made more predictable and that the duplication of work is reduced. This will enable duty holders / owners to focus more on the active follow-up of health, environment and safety rather than paper work.

The short-term application of this report may assist in dealing with 3 different situations:

1. A MODU with neither an AoC nor a Safety Case
2. A MODU with an accepted AoC
3. A MODU with an accepted Safety Case

Recommended actions to be taken in situation 1:

If preparing the MODU for possible operations in both Norway and the UK, the duty holder / owner could use the NWE HSE Case guidelines prepared by the IADC and then measure compliance with either the NPD or the HSE

regulations in addition to the gaps described in this report. Using this method would avoid the need to build 2 separate cases; one based on NPD regulations and the other on the UK regulations. This method should then secure compliance with both regimes (ref. Appendices 13-14).

Recommended actions to be taken in situation 2:

When moving a MODU with an accepted AoC from Norway to UK the gaps identified between HSE and NPD regulations in this report need to be evaluated in order to obtain a UK Safety Case (ref. Appendix 13). Hence the UK Safety Case would equal the AoC with an additional evaluation of the gaps identified in Appendix 13.

Recommended actions to be taken in situation 3:

When moving a MODU with an accepted Safety Case from UK to Norway the gaps identified between NPD and HSE regulations in this report need to be evaluated (ref. Appendix 14). Hence the AoC would equal the UK Safety Case with an additional evaluation of the gaps identified in Appendix 14.

An agreement has been made on a pilot Safety Case submission according to recommendation 2 above. The pilot has been accepted and supported by the HSE and the NPD. The rig chosen for the pilot is the semi-submersible West Vanguard.

7.3.2 Long term

We recommend that, in the future, the regulators take the necessary steps towards a common regulatory regime.

The gaps identified and discussed in this report may be approached one by one. As a first step we recommend that new projects be established to further seek out and recommend in detail how to approach the identified gaps in cases of change of territory between Norway and UK.

Further we recommend that the NPD and the HSE agree on common regulations for each gap, one at the time. In this way the gaps between the two regimes will gradually be reduced.

Finally we recommend that all new requirements should be agreed upon between the countries before being introduced to the industry, hence preventing an increased gap between the regimes.

8.0 DEFINITIONS & ABBREVIATIONS

NPD: Norwegian Petroleum Directorate

HSE: Health & Safety Executive

SO: Smedvig Offshore AS
AoC: Acknowledgement of Compliance
IADC: International Association of Drilling Contractors
SAHD: Safety and Health Document (Dutch)
SodM: Staatstoezicht op de Mijnen (State Supervision of Mines)
NCS: Norwegian Continental Shelf
SHE: Safety, Health & Environment
NWE HSE CASE: North West European Health Safety & Environment Case

Safety-critical elements: Such parts of an installation and such of its plant (including computer programmes), or any part thereof –

- a) the failure of which could cause or contribute substantially to, or
- b) a purpose of which is to prevent or limit the effect of, a major accident.

ICP: Independent Competent Person; persons (any body of people corporate or unincorporate) conducting verification activities who are suitably independent and competent.

9.0 REFERENCES

HSE	http://www.open.gov.uk/hse/hsehome.htm
HSE Books	http://www.hsebooks.co.uk
DTI Oil and Gas Directorate	http://www.og.dti.gov.uk
IADC	http://www.iadc.org
UKOOA	http://www.oilandgas.org.uk
NPD	http://www.npd.no/
NMD	http://www.sjofartsdir.no/
NORSOK	http://www.nts.no/norsok
Norges Rederiforbund	http://www.rederi.no
OLF	http://www.olf.no/
AAD (Arbeids & adm.dep.)	http://www.odin.dep.no/aad/
Smedvig	http://www.smedvig.no

10.0 APPENDICES

Appendix 1 Project plan

Regulatory requirement project 2001/2002 (NPD vs. HSE)

ID	Task Name	Duration	Start	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter
				Sep					
1	✓ Scope	10 days	Thu 06.09.01						
2	✓ Purpose	10 days	Thu 06.09.01						
3	✓ Scope	10 days	Thu 06.09.01						
4	✓ Objectives	10 days	Thu 06.09.01						
5	✓ Terms and conditions	10 days	Thu 06.09.01						
6	✓ Study	151 days	Thu 06.09.01						
7	✓ Report structure	25 days	Thu 06.09.01						
8	✓ Verification basis	25 days	Thu 06.09.01						
9	✓ Define detail level	25 days	Thu 06.09.01						
10	✓ Matrixes NPD	77 days	Tue 09.10.01						
11	✓ Frame regulation	24 days	Fri 12.10.01						
12	✓ Activity regulation	31 days	Wed 12.12.01						
13	✓ Installation regulation	21 days	Wed 14.11.01						
14	✓ Management regulation	23 days	Fri 12.10.01						
15	✓ Information regulation	2 days	Tue 09.10.01						
16	✓ Matrixes HSE	52 days	Wed 23.01.02						
17	✓ Safety Case Regulations (SCR)	2 days	Wed 23.01.02						
18	✓ Design & Construction Regulations (DCR)	22 days	Tue 05.02.02						
19	✓ Prevention of Fire & Explosion and Emergenc	22 days	Mon 04.03.02						
20	✓ Management & Administration Regulations (I	2 days	Wed 23.01.02						
21	✓ Provision and Use of Work Equipment Reg (P	22 days	Tue 05.03.02						
22	✓ Pipeline Safety Regulations (PSR)	22 days	Tue 05.03.02						
23	Results	69 days	Mon 08.04.02						
24	✓ Evaluation of gap AoC vs. SC	40 days	Mon 08.04.02						
25	✓ Evaluation of gap SC vs. AoC	40 days	Mon 08.04.02						
26	✓ Relevant parallel projects	40 days	Mon 08.04.02						
27	✓ Review by NPD/HSE	21 days	Mon 27.05.02						

Regulatory requirement project 2001/2002 (NPD vs. HSE)

ID	Task Name	Duration	Start	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	Sep	
28	Finalise report	3 days	Tue 25.06.02								
29	Approval by Smedvig Q&HSE Manager	3 days	Tue 02.07.02								
30	Acknowledgement by NPD/HSE	5 days	Fri 05.07.02								
31	Follow-up/recommendations	26 days	Thu 04.04.02								
32	Short term	26 days	Thu 04.04.02								
33	Long term	26 days	Thu 04.04.02								
34	Work schedule	361 days	Fri 20.04.01	—————							
35	Kick off	1 day	Fri 20.04.01								
36	Work shop 1	2 days	Thu 06.09.01								
37	Work shop 2	1 day	Fri 12.10.01								
38	Work shop 3	1 day	Wed 17.10.01								
39	Work shop 4	3 days	Tue 13.11.01								
40	Work shop 5	2 days	Wed 12.12.01								
41	Work shop 6	3 days	Tue 22.01.02								
42	Work shop 7	3 days	Tue 12.02.02								
43	Work shop 8	3 days	Wed 06.03.02								
44	Work shop 9	2 days	Mon 08.04.02								
45	Work Shop 10	3 days	Tue 07.05.02								
46	Work shop 11	3 days	Wed 22.05.02								
47	Work shop 12	3 days	Wed 26.06.02								
48	Work shop 13	3 days	Wed 04.09.02								
49	Meetings	210 days	Fri 07.09.01	—————							
50	Meeting with IADC	1 day	Mon 22.10.01								
51	Meeting #2 with IADC	1 day	Wed 08.05.02								
52	Meeting #1 with NPD	1 day	Fri 07.09.01								
53	Meeting #2 with NPD	1 day	Wed 22.05.02								
54	Meeting with HSE	1 day	Thu 23.05.02								

Regulatory requirement project 2001/2002 (NPD vs. HSE)

ID	Task Name	Duration	Start	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	Sep
55	✓ Presentation for NSOAF	1 day	Wed 13.02.02				◆			
56	✓ Review presentation for NSOAF	1 day	Thu 27.06.02							
57	✓ Meeting with DNV	1 day	Tue 07.05.02					◆		
58	✓ Presentation International Operators Forum	1 day	Fri 31.05.02							

Appendix 2 Matrix NPD Framework HSE Regulation

RELATIONS BETWEEN THE FRAMEWORK HSE REGULATIONS AND UK REGULATION

Frame regulation	UK regulation	Gap (Y/N)	Comments
§ 1 Purpose	N/A		Regime related
§ 2 Scope of application etc	N/A		Regime related
§ 3 Use of maritime legislation in the petroleum activities	N/A		Regime related
§ 4 Definitions	N/A		Regime related
§ 5 Responsibility according to these regulations	SCR – Introduction & Reg 2, PFEER – Reg 2	N	Duty holder
§ 6 Arrangements for employee contribution	HSWA – Reg 2 (4)(6), SRSCR	N	
§7 Use of the principles of Chapter III	SCR – Introduction & Reg 2	N	Duty holder
§ 8 Prudent petroleum activities	HSWA – Reg 1	N	
§ 9 Principles relating to risk reduction	PFEER – Reg 4, 5	N	
§ 10 Organisation and competence	HSWA – Reg 2 (2)(c)	N	Org. in Norway = N/A
§ 11 Favourable health, environment and safety culture	PFEER – Reg 4	Y	No req. for environment
§ 12 Health related aspects	MHSWR – Reg 5, MAR – Reg 16	N	
§ 13 Duty to establish, follow up and further develop amanagement system	SCR – Reg 8, SMS	N	
§ 14 Qualification and follow-up of other participants	MAR Reg 8, SMS, Combined Ops. 4.3 (UKOOA)	Y	
§ 15 Verifications	SCR - Reg 15A	N	
§ 16 Use of the Norwegian language	SRSCR – Reg 2	Y	Req. for Norwegian language applies only in Norway. UK req. appropriate language
§ 17 General requirements to material and information	SCR - Reg 15	N	
§ 18 Documentation	SCR - Reg 15	N	
§ 19 Documentation in the early phase	SCR - Reg 15	N	Refers to operator
§20 Matters relating to health, environment and safety in the plan for development and operation of petroleum deposits and plan for installation and operation of facilities for transport and utilisation of petroleum	N/A		Operator related
§ 21 Application for consent	N/A		Operator related
§ 22 Decommissioning plan	N/A		Operator related (relevant for fixed installations)
§ 23 Publicly available information on safety	SCR - Reg 15	N	
§ 24 Development concepts	N/A		Operator related

RELATIONS BETWEEN THE FRAMEWORK HSE REGULATIONS AND UK REGULATION

Frame regulation	UK regulation	Gap (Y/N)	Comments
§ 25 Data regarding natural conditions	N/A		Operator related
§ 26 Placing of facilities, choice of routes	N/A		Operator related
§ 27 Duty to monitor the external environment	N/A		Operator related
§ 28 Use of facilities	N/A		Operator related
§ 29 Co-ordination of emergency preparedness	PFEER – Reg 15	Y	More responsibility put on Duty Holder in UK
§ 30 Co-operation on emergency preparedness	PFEER – Reg 15	Y	More responsibility put on Duty Holder in UK
§ 31 Safety manning in the event of industrial disputes	PFEER – Reg 6	Y	
§ 32 International law	N/A		Regime related
§ 33 Establishment of safety zones	DCR – Reg 2, MAR – Reg 3	N	500m sone
§ 34 Establishment of safety zones for subsea facilities	N/A		Regime/Operator related. Not relevant for a MODU.
§ 35 Specific safety zones established in situations of hazard and accident	N/A		Regime/Operator related
§ 36 Requirement to impact assessments etc.	N/A		Operator related
§ 37 Revocation of safety zones	N/A		Operator related
§ 38 Monitoring of safety zones	DCR – Reg 2, MAR – Reg 3, PFEER – Reg 10	Y	UK place responsibility on Duty Holder. In Norway resp. is on operator
§ 39 Alert and notification in connection with entry into safety zones	RIDDOR – ON11, OIR/13 (Safety Zones)	N	
§ 40 Measures against intruding vessels or objects	RIDDOR – ON11, OIR/13 (Safety Zones)	N	
§ 41 Marking of safety zones	N/A		Regime/Operator related
§ 42 Announcement of safety zones	N/A		Operator related
§ 43 Several employers at the same workplace, general	HSWA – Reg 3(1), SCR – Reg 14 MHSWR – Reg 11(1)	N	
§ 44 Several employers at the same workplace, principal enterprise	HSWA – Reg 3(1), SCR – Reg 14, SRSCR, RIDDOR MHSWR – Reg 11(1)	Y	No direct req. in UK for Principle enterprise. The preparation and operation of contracts in the petroleum industry (by OIAC) section 29.
§ 45 Joint working environment committees	SRSCR – Reg 22	N	
§ 46 Right of the responsible safety delegate to stop dangerous work	SRSCR – Reg 17	Y	UK – Req. two or more safety reps. They may make a report to duty holder or an inspector.
§ 47 Ordinary working hours	Regulatory req. not identified	Y	
§ 48 Plans of working hours arrangements and periods of stay	Regulatory req. not identified	Y	

RELATIONS BETWEEN THE FRAMEWORK HSE REGULATIONS AND UK REGULATION

Frame regulation	UK regulation	Gap (Y/N)	Comments
§ 49 Travel time and working hours	Regulatory req. not identified	Y	
§ 50 Rest breaks	Regulatory req. not identified	Y	
§ 51 Overtime	Regulatory req. not identified	Y	
§52 Periods of stay	Regulatory req. not identified	Y	
§ 53 Off-duty periods and time off	Regulatory req. not identified	Y	
§ 54 Minimum age	Regulatory req. not identified	Y	
§55 Supervisory authority	N/A		Regime related
§ 56 Authorities' access to facilities and vessels	N/A		Regime related
§ 57 Regulations	N/A		Regime related
§ 58 Individual decisions	N/A		Regime related
§ 59 Exemptions	N/A		Regime related
§ 60 Training of civil servants	N/A		Regime related
§ 61 Appeal	N/A		Regime related
§ 62 Sanctions	N/A		Regime related
§ 63 Entry into force and repeal of regulations	N/A		Regime related

**RELATIONS BETWEEN THE FRAMEWORK HSE REGULATIONS
AND UK REGULATION**

Frame regulation	UK regulation	Gap (Y/N)	Comments
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Appendix 3 Matrix NPD Management Regulation

RELATIONS BETWEEN THE MANAGEMENT REGULATION AND UK REGULATION

Management regulation	UK regulation	Gap (Y/N)	Comments
§ 1 Risk reduction	SCR – Reg 8, §165	N	
§ 2 Barriers	SCR – Reg 8, PFEER – Reg 5	N	
§ 3 Management of health, environment and safety	SCR – Reg 8, PFEER – Reg 4	N	
§ 4 Objectives and strategies	SCR – Reg 8, PFEER – Reg 4	N	
§ 5 Internal requirements	SCR – Reg 8, PFEER – Reg 4	N	
§ 6 Acceptance criteria for risk relating to major accident and risk relating to the environment	PFEER – Reg 5	N	Duty holder
§ 7 Monitoring parameters and indicators	SCR – Reg 8, PFEER – Reg 4-5, MHSWR - Reg. 4	Y	Lacking req. for setting goals for and measure all conditions relevant for HSE, incl. degree of goal attainment
§ 8 Basis and criteria for decision	SCR – Reg 8, PFEER – Reg 4-5, MHSWR - Reg. 4	Y	Ref. §7 above.
§ 9 Planning	SCR – Reg 8, PFEER – Reg 4-5, MHSWR - Reg. 4	Y	Ref. §7 above.
§ 10 Work processes	SMS	Y	No req. for process
§ 11 Manning and competence	HSWA – Reg 2(2)(c), MHSWR - Reg. 13, PUWER – Reg.9	N	No general req.
§ 12 Information	HSWA – Reg 2(2)(c), MHSWR – Reg 10	N	Less specific
§ 13 General requirements to analyses	PFEER – Reg 5	N	
§ 14 Analysis of risk relating to major accidents	PFEER – Reg 5	N	
§ 15 Quantitative risk analyses and emergency preparedness analyses	PFEER – Reg 5	N	
§ 16 Environmentally oriented risk and emergency preparedness analyses	No req.	Y	Covered by SOPEP (MARPOL, SOLAS)
§ 17 Analysis of the working environment	HSWA – Reg 2 (1), 2(2)(e)	Y	No spec. req. for working environment analysis
§ 18 Collection, processing and use of data	HSWA – Reg 2(2)(c)	N	
§ 19 Registration, examination and investigation of situations of hazard and accident	RIDDOR - Reg.3	N	
§ 20 Handling of non-conformities	No relevant ref. found. Only req. for the Executive	Y	NPD req.= ISO 9001:2000
§ 21 Follow-up	HSWA – Reg 2(2)(d)(e), SCR – Reg 8, SMS, PFEER – Reg 4	N	
§ 22 Improvement	SCR – Reg 8, SMS, PFEER – Reg 4	N	
§ 23 Entry into force	N/A		Regime related

**RELATIONS BETWEEN THE MANAGEMENT REGULATION AND
UK REGULATION**

Management regulation	UK regulation	Gap (Y/N)	Comments
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Appendix 4 Matrix NPD Activity Regulation

Relations between the Activity regulation and UK regulation

Activity regulation	UK regulation	Gap (Y/N)	Comments
§1 Systems and other equipment for manned underwater operations from vessels	N/A		Regime related
§2 Co-ordinating working environment committees for fields, and joint, local working environment committees for mobile facilities	SRSCR – Reg 19, 20	N	
§3 Safety and health personnel	MHSWR – Reg 7	N	
§4 Control of employee's health	MAR – Reg 16, MHSWR – Reg 6, MHSW ACOP §§ 30-33	Y	
§5 Recording of work hours	Regulatory req. not identified	Y	
§6 The health service	MHSWR – Reg 7, COSHH – Reg 11, MAR – Reg 16, OFAR – Reg 5(2)	Y	Req. for doctor and nurse
§7 Duties of the health service	MHSWR – Reg 6, 7, COSHH – Reg 11, MAR – Reg 16, OFAR – Reg 5(2)	N	
§8 Doctor on call	OFAR Reg 5	N	
§9 Medicinal products and medical equipment	OFAR – Reg 5(1), COSHH – Reg 9	N	
§10 Control of communicable diseases	OFAR – Reg 5(1), , COSHH – Reg 11	N	
§11 Food products and drinking water	MAR – Reg 17	N	
§12 Cleaning	DCR – Reg 12 – Shedule 1 §2	N	
§13 Pilot studies	N/A	N	Operator related
§14 Installation and commissioning	N/A	N	Operator related
§15 Transport	N/A	N	Operator related
§16 Stay on facilities	MAR – Reg 9, 11, 15	N	
§17 Accommodation	Regulatory req. not identified	Y	
§18 Startup of facilities	SCR – Reg 5, 8, Schedule 3	N	
§19 Competence	HSWA – Reg 2(2)(c), MHSWR - Reg. 13, PUWER – Reg.9	N	
§20 Safety and working environment training according to the Working Environment Act	HSWA – Reg 2(2)(c), MHSWR - Reg. 13, PUWER – Reg.9	N	NPD req. 40hrs course. Req. is covered for OIM.
§21 Practice and exercises	HSWA – Reg 2(2)(c), MHSWR - Reg. 13, PUWER – Reg.9	N	
§22 Procedures	SCR – Reg 8 §1	N	
§23 Use of facilities	SCR – Reg 5, 8, DCR – Reg 7	N	
§24 Safety systems	SCR – Reg 5, 8, DCR – Reg 7, PUWER – Reg 15, 16	N	
§25 Critical activities	SCR – Reg 8, DCR – Reg 7	N	
§26 Simultaneous activities	SCR – Reg 6	N	
§27 Planning	SCR – Reg 8, PFEER – Reg 5	N	
§28 Actions during conduct of activities	MAR – Reg 10	N	
§29 Monitoring and control	MAR – Reg 16, MHSWR – Reg 6, COSHH – Reg 10, 11	N	
§30 Transfer of information	MHSWR – Reg 8	Y	
§31 Adaptation of work	COSHH – Reg 6, 7	N	
§32 Ergonomic aspects	DCR – Reg 12, Schedule 1 §4, DSER, MHOR	N	DSER = Display Screen Equipment Regulations, MHOR = Manual Handling Operations Reg.
§33 Psychosocial aspects	MHSWR - Reg 4, Schedule 1	N	
§34 Chemical health hazard	COSHH – Reg 6, 7	N	
§35 Radiation	COSHH – Reg 7, Ionising Radiation Regulations	N	

Relations between the Activity regulation and UK regulation

Activity regulation	UK regulation	Gap (Y/N)	Comments
§36 Noise and vibrations	NWR – Reg 6, 7, DCR – Reg 12, Schedule 1 §67	N	NWR = Noise at Work Regulations
§37 Outdoor work	DCR – Reg 12, Schedule 1 §§44-46	N	
§38 Safety signs and signalling in the workplace	DCR – Reg 12, Schedule 1 §36, PFEER – Reg 14 §2, SSSR	N	SSSR = Safety Signs and Signals Regulations
§39 Personal protective equipment	PPEWR – Reg 4, PFEER – Reg 18	N	PPEWR = Personal Protective Equipment at Work Regulations
§40 Use of work equipment	PUWER, PPEWR – Reg 4, Work Equipment Regulations	N	
§ Information on risk during conduct of work	MHSWR – Reg 10, COSHH – Reg 12, PFEER – Reg 21	N	
§42 Maintenance	DCR – Reg 8, PUWER – Reg 5, PFEER – Reg 19, COSHH – Reg 9	N	
§43 Classification	SCR – Reg 15A, PUWER Part II	N	
§44 Maintenance programme	DCR – Reg 8, PUWER – Reg 5, PFEER – Reg 19	N	NPD refer to detailed NORSOK and IEC standards
§45 Planning and priorities	DCR – Reg 8, PUWER – Reg 5, PFEER – Reg 19	N	
§46 Maintenance effectiveness	SCR – Reg 15A, PUWER Part II	N	
§47 Specific requirements to condition monitoring of structures and pipeline systems	DCR – Reg 7, 8, PSR – Reg 13, MAR – Reg 14	N	NPD req. for data collection 2 first winters
§48 Specific requirements to testing of blowout preventer	DCR – Reg 13, 17, SCR – Reg 15A, PUWER Part II	Y	
§49 Co-operation on and planning of external environment monitoring	N/A		Operator related
§50 Remote measurement of acute pollution	N/A		Operator related
§51 Baseline surveys	N/A		Operator related
§52 Environmental monitoring	N/A		Operator related
§53 Follow-up surveys	N/A		Operator related
§54 Characterisation of oil and chemicals	N/A		Operator related
§55 Discharge of oil-contaminated water	IOPP, Merchant Shipping Reg. 1983 No. 1398, Reg. 14 §2	N	UK req. 100 ppm separating or 15 ppm filter IOPP = Prevention of Oil Pollution Act 1971 & 1986
§56 Testing and evaluation of chemicals	COSHH – Reg 6	Y	
§57 Use and discharge of chemicals	Merchant Shipping Act 1979, MARPOL 1973, DTI Petroleum Operations Notice (PON) no. 2	N	
§58 Chemicals for emergency preparedness	N/A		Operator related
§59 Discharge of cuttings, sand and solid particles	N/A		Operator related
§60 Discharge from formation testing and cleanup of wells	Merchant Shipping Act 1979, MARPOL 1973, DTI Petroleum Operations Notice (PON) no. 2, IOPP	N	
§61 Measuring the quantity of discharged oil, other substances and water	Merchant Shipping Act 1979, MARPOL 1973, DTI Petroleum Operations Notice (PON) no. 2, IOPP	N	
§62 Measuring associated fluids discharged with solids	N/A		Operator related
§63 Waste	Merchant Shipping Act 1979, MARPOL 1973, DTI Petroleum Operations Notice (PON) no. 2	N	MARPOL = International Convention for the Prevention of Pollution from Ships

Relations between the Activity regulation and UK regulation

Activity regulation	UK regulation	Gap (Y/N)	Comments
§64 Establishing emergency preparedness	PFEER – Reg 6	N	
§65 Joint use of emergency preparedness resources	PFEER – Reg 8	N	
§66 Emergency preparedness organisation	PFEER – Reg 6	N	
§67 Emergency preparedness plans	PFEER – Reg 8	N	
§68 Handling of situations of hazard and accident	PFEER – Reg 12, 13	N	
§69 Regional emergency preparedness against acute pollution	N/A		Operator related
§70 Action against acute pollution	N/A		Operator related
§71 Communication	MAR – Reg 11, PFEER – Reg 11, RIDDOR	N	NPD req. for appointing comm. resp.
§72 Well programme	DCR – Reg 13	N	
§73 Well location and well path	N/A		Operator related
§74 Handling of shallow gas	DCR – Reg 13, 14	N	
§75 Monitoring of well parameters	N/A		Operator related
§76 Well barriers	DCR – Reg 13, 17	N	
§77 Well control	DCR – Reg 13, 17	N	
§78 Controlled well flow	DCR – Reg 13, 17	N	
§79 Securing of wells	DCR – Reg 13, 15	N	NPD req. for no radioactive sources left in well
§80 Remote operation of pipes and workstrings	DCR – Reg 13, LOLER – Reg 8, PUWER – Reg 3-5	Y	
§81 Positioning	MAR – Reg 8	Y	
§82 Work on and operation of electrical installations	EWR	N	EWR= Electricity at Work Regulations, NPD req. for appointing responsible for electrical systems
§83 Lifting operations	LOLER – Reg 8, 9	Y	NPD req. for communication
§84 Manned underwater operations	N/A		Operator related
§85 Provisions relating to time periods	N/A		Operator related
§86 Entry into force	N/A		Regime related

Relations between the Activity regulation and UK regulation

Activity regulation	UK regulation	Gap (Y/N)	Comments
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Appendix 5 Matrix NPD Facility Regulation

Relations between the Facility regulation and UK regulation

Installation regulation	UK regulation	Gap (Y/N)	Comments
§ 1 Definitions	N/A		Regime related, SCR – Reg 15A for SCE
§2 Installations and equipment for manned underwater operations from vessels	N/A		Regime related
§3 Choice of development concept	N/A		Operator related
§ 4, Design of facilities	DCR – Reg 5, Introduction, Schedule 1, PFEER – Reg 5	Y	UK reg. do not cover NPD req. §4 c,d,f,h,i
§ 5, Design of simpler facilities without overnight stay possibility	N/A		Operator related (not relevant for MODUs).
§ 6, Main safety functions	PFEER – Reg 5, 12, 14, DCR – Reg 4	N	
§7 Safety functions	SCR – Reg2, PFEER – Reg 10, 12	N	Safety Critical Elements
§ 8, Qualification and use of new technology and new methods	PUWER – Reg 4, PFEER – Reg 5	N	
§ 9, Plants, systems and equipment	PUWER – Reg 4, 8, 11	N	
§ 10, Loads, load effects and resistance	DCR – Reg 5	N	
§ 11, Materials	DCR – Reg 5, COSHH – Reg 7	N	
§ 12, Handling of materials and transport routes, access and evacuation routes	DCR – Reg 5, Schedule 1, PFEER – Reg 14	N	
§ 13, Ventilation and indoor climate	DCR – Reg 12, Schedule 1	N	
§ 14, Chemicals and chemical exposure	DCR – Reg 5, COSHH – Reg 7	N	
§ 15, Location and handling of inflammable and explosive goods	PFEER – Reg 9	N	
§ 16, Instrumentation for monitoring and recording	DCR – Reg 7, 8, MAR – Reg 14	N	
§ 17, Systems for internal and external communication	PFEER – Reg 11, MAR – Reg 12	Y	Conflicts in req. regarding light and sound signals
§ 18 Communication equipment	PFEER – Reg 11, MAR – Reg 12	N	
§ 19, Ergonomic design	DCR – Reg 12, Schedule 1, DSER – Reg 3, PFEER – Reg 12	N	DSER = Display Screen Equipment Reg
§ 20, Man-machine interface and information presentation	DCR – Reg 5, COSHH – Reg 7, PFEER – Reg 11, DSER – Reg 3	N	
§ 21, Outdoor work areas	DCR – Reg 12, Schedule 1	N	
§ 22, Noise and acoustics	DCR – Reg 12, Schedule 1, NWR – Reg 6,7	Y	NWR = Noise at Work Reg, NORSOK S-002N
§ 23, Vibrations	DCR – Reg 12, Schedule 1	Y	NORSOK S-002N
§ 24, Lighting	DCR – Reg 12, Schedule 1	Y	NORSOK S-002N
§ 25, Radiation	PPEWR – Reg 3	N	Ref. Ionising Radiations Reg (IRR)
§ 26, Equipment for transportation of personnel	LOLER – Reg 5	N	Spooling device for Man Riding Winch?
§ 27, Safety signs	DCR – Reg 12, Schedule 1	N	
§ 28, Passive fire protection	PFEER – Reg 9, 13	N	
§ 29, Fire divisions	PFEER – Reg 9, 13	N	
§ 30, Fire divisions in living quarters	PFEER – Reg 9, 13	N	Req. for H-60, A-60 not specifically defined in UK reg.
§ 31, Fire and gas detection systems	PFEER – Reg 10	N	
§ 32 Emergency shutdown systems	PFEER – Reg 12	N	
§ 33, Process safety systems	N/A		Operator related
§ 34, Gas release systems	N/A		Operator related
§ 35, Fire water supply	PFEER – Reg 12, 13	N	
§ 36, Fixed fire-fighting systems	PFEER – Reg 12, 13	N	
§ 37, Emergency power and emergency lighting	DCR – Reg 4, 5, PFEER – Reg 4, 5	Y	
§ 38, Ballasting systems	DCR – Reg 5, 7, PFEER – Reg 10	Y	NPD ref. to NMD Ballast reg. (1991)
§ 39, Open drainage systems	DCR – Reg 4, 5, PFEER – Reg 4, 5	Y	
§ 40, Equipment for rescue of personnel	PFEER – Reg 17	N	
§ 41, Material for action against acute pollution	N/A		Operator related
§ 42, Standby vessels	N/A		Operator related

Relations between the Facility regulation and UK regulation

Installation regulation	UK regulation	Gap (Y/N)	Comments
§ 43, Means of evacuation	PFEER – Reg 15, 16	N	
§ 44, Survival suits and life jackets etc.	PFEER – Reg 18	N	
§ 45, Manual firefighting and fireman's equipment	PFEER – Reg 12	N	
§46, Electrical installations	EWR – Reg 4	N	EWR = Electricity at Work Reg.
§ 47, Well barriers	PFEER – Reg 4, 5, DCR – Reg 4, 5, PUWER 4-6, BSOR	Y	BSOR = Boreholes Sites and Operations Regulations 1995
§ 48, Well control equipment	PFEER – Reg 4, 5, DCR – Reg 4, 5, PUWER 4-6, BSOR	Y	
§ 49, Compensator and disconnection systems	PFEER – Reg 4, 5, DCR – Reg 4, 5, PUWER 4-6, BSOR	Y	
§ 50, Drilling fluid system	PFEER – Reg 4, 5, DCR – Reg 4, 5, PUWER 4-6, BSOR	Y	
§ 51, Cementing unit	PFEER – Reg 4, 5, DCR – Reg 4, 5, PUWER 4-6, BSOR	Y	
§ 52, Casings and anchoring of wells	N/A		Operator related
§ 53, Equipment for completion and controlled well flow	N/A		Operator related
§ 54, Christmas tree	N/A		Operator related
§ 55, Remote operation of pipes and workstrings	DCR - Reg 4-5, LOLER – Reg 3, PUWER – Reg 3-5	Y	
§ 56, Production plants	N/A		Operator related
§ 57, Main loadbearing structures	DCR – Reg 4, 12, PFEER – Reg 9	Y	Single fault ++
§ 58, Pipeline systems	DCR – Reg 4, 12, PFEER – Reg 9, PSR – Reg 9	N	
§ 59, Living quarters	DCR – Reg 12, Schedule 1	Y	NPD ref. to NORSOK
§ 60, Health department	MHSWR – Reg 5, MAR – Reg 16, DCR – Reg 12, Schedule 1, OFAR – Reg 5	Y	OFAR = Offshore First-Aid Reg.
§ 61, Emergency hospital	OFAR – Reg 5	Y	
§ 62, Supply of food products and drinking water	DCR – Reg 12, Schedule 1, MAR – Reg 17	Y	
§ 63, Stability	DCR – Reg 7	Y	NPD ref. to NMD Stability reg. (1991)
§ 64, Anchoring, mooring and positioning	DCR – Reg 5, 6	N	DCR incl. ref. to PUWER for DP
§ 65, Turret	N/A		Operator related (relevant for MOUs with production plant and equipment only).
§ 66, Systems and equipment for manned underwater operations	N/A		Operator related
§ 67, Loading and discharging facilities	PSR - Reg 6, PFEER - Reg 9	Y	
§ 68, Waste	COSHH – Reg 7, WMR	N	Ref. MARPOL WMR = Waste Management Regulations
§ 69, Exhaust ducts	DCR - Reg 4, 5, PFEER - Reg 4, 5, 9	Y	
§ 70, Lifting appliances and lifting gear	LOLER	N	
§ 71, Helicopter decks	DCR – Reg 11, PFEER – Reg 7, 13	N	
§ 72, Marking of facilities	MAR – Reg 19	N	
§ 73, Marking of equipment and cargo	PUWER - Reg 23, LOLER - Reg 7 re safety data – IMDG Code as appropriate	Y	No req. identified regarding name of owner etc Schedule 1
§ 74, Lifts	PUWER – Schedule 1, LOLER - Reg 5	N	
§ 75, Simple pressure vessels	PUWER Reg 9, Schedule 1	N	
§ 76, Personal protective equipment	PPEWR	N	PPE = Personal Protective Equipment at Work Reg.
§ 77, Aerosols	PUWER – Schedule 1	Y	No specific req. identified related to aerosols
§ 78, EMC	PUWER Reg 9, Schedule 1	N	
§ 79, Ex-equipment	PUWER Reg 9, Schedule 1	N	
§ 80, ATEX	PUWER Reg 9, Schedule 1	N	
§ 81, Pressure equipment not comprised by the Facilities Regulations	N/A		Regime related
§ 82, Machinery and safety components not comprised by the Facilities Regulations	N/A		Regime related
§ 83 Entry into force	N/A		Regime related

Relations between the Facility regulation and UK regulation

Installation regulation	UK regulation	Gap (Y/N)	Comments
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Appendix 6 Matrix NPD Information duty Regulation

RELATIONS BETWEEN THE INFORMATION DUTY REGULATION AND UK REGULATION

Information regulation	UK regulation	Gap (Y/N)	Comments
§ 1 Preparation of material and information	SCR – Reg. 15	Y	SCR cover req. for documentation related to safety case only. NPD req. cover all aspects.
§ 2 Directly available information	SCR – Reg. 15	Y	SCR cover req. for documentation related to safety case only. NPD req. cover all aspects.
§ 3 Publicly available information	SCR – Reg. 15, MAR – Reg 14	Y	SCR cover req. for documentation related to safety case only. NPD req. cover all aspects.
§ 4 Retention period and discarding	SCR – Reg. 15	Y	SCR cover req. for documentation related to safety case only. NPD req. cover all aspects.
§ 5 Requirement on consent to certain petroleum activities	N/A		Operator related
§ 6 Contents of application for consent	N/A		Operator related , Ref. DCR – Reg 3
§ 7 Drilling and well activities	N/A		Operator related
§ 8 Well programme in the event of collective dismissals	N/A		Operator related
§ 9 Information on monitoring, discharge and risk of pollution	N/A		Operator related Ref. SI 1988 No.2292, MARPOL, PON
§ 10 Material and information to be submitted to other institutions	N/A		Operator related
§ 11 Alert and notification to the supervisory authorities of situations of hazard and accident	DCR Reg. 9, RIDDOR – Reg 3	Y	Duty holder to report, not Operator
§ 12 Follow-up	N/A		Operator related
§ 13 Notification of accident which has resulted in death or personal injury	RIDDOR SI 1972/1542	N	Report using F2508 or OIR Form 9B
§ 14 Notification of possible work related disease	RIDDOR	N	Reg 5
§ 15 Reporting of work hours	N/A		Operator related
§ 16 Reporting of manned underwater operations	N/A		Operator related
§ 17 Reporting of drilling and well activities	N/A		Operator related
§ 18 Reporting of damage to loadbearing structures and pipeline systems	N/A		Operator related
§ 19 Entry into force	N/A		Regime related

**RELATIONS BETWEEN THE INFORMATION DUTY REGULATION
AND UK REGULATION**

Information regulation	UK regulation	Gap (Y/N)	Comments
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Appendix 7 Matrix HSE Safety Case Regulations (SCR)

RELATIONS BETWEEN *THE SAFETY CASE REGS.* AND NORWEGIAN REGULATION

SCR	Norwegian regulation	Gap (Y/N)	Comments
§ 1 Citation and commencement	N/A		Regime related
§ 2 Interpretation	N/A		Regime related
§ 3 Application	N/A		Regime related
§ 4 Safety case for fixed installations	N/A		Operator related
§ 5 Safety case for mobile installations	Frame §§3,21	Y	HSE Req. safety case. AoC is not a req.
§ 6 Safety case for combined operations	Activity §26	Y	HSE req. for safety case
§7 Safety case for abandonment of fixed installations	N/A		Operator related
§ 8 Management of health and safety and control of major accident hazards	Frame §13, Management §§3,6,13,21	N	
§ 9 Revision of safety cases	Frame §21	N	
§ 10 Duty to conform with safety case	Management §21	N	
§ 11 Notification of well operations	Frame §21, Information §6	N	
§ 12 Notification of construction activities	Frame §§19,20	N	
§ 13 Transitional provisions	N/A		Regime related
§ 13A Transitional provision relating to verification	N/A		Regime related
§ 14 Co-operation	Frame §11	N	
§ 15 Keeping of documents	Information §1, Frame §§17,18	Y	HSE req for location of doc.
§ 15A Verification schemes for safety-critical elements	Frame §15, Management §§1-2, Facility §1	Y	HSE req for ICP.
§ 15B Matters to be included in a verification scheme	Frame §15, Management §§1-2, Facility §1	Y	HSE req for ICP
§ 15C Review and revision of verification schemes	Management §21	N	
§ 15D Continuing effect of verification schemes	Management §21	N	
§ 15E Defence	N/A		Regime related
§ 16 Amendments to the Offshore Installations (Safety Representatives and Safety Committees) Regulations	Frame §6	N	
§ 17 Exemptions	Frame §59	N	

**RELATIONS BETWEEN *THE SAFETY CASE REGS.* AND
NORWEGIAN REGULATION**

SCR	Norwegian regulation	Gap (Y/N)	Comments
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Appendix 8 Matrix HSE Design & Construction Regulations (DCR)

RELATIONS BETWEEN *THE DESIGN AND CONSTRUCTION REGS.* AND NORWEGIAN REGULATION

DCR	Norwegian regulation	Gap (Y/N)	Comments
§ 1 Citation and commencement	N/A		Regime related
§ 2 Interpretation	N/A		Regime related
§ 3 Application	N/A		Regime related
§ 4 General duty	Frame §5, Facility §4	N	
§ 5 Design of an installation	Facility §§3,4	N	
§ 6 Work to an installation	Facility §3, Activity §§23, 27	N	
§ 7 Operation of an installation	Facility §3, Activity §23	N	
§ 8 Maintenance of integrity	Activity §42	N	
§ 9 Reporting of danger to an installation	Activity §68, Information §§11,12, Management §19	N	UK Req. for 10 days, NPD 2hrs
§ 10 De-commissioning and dismantlement	Frame §§20, 22, 28	N	
§ 11 Helicopter landing area	Facility §71	N	
§ 12 Additional requirements	Section 1 – 12.1-12.21 below	-	
12.1 Organisation of the installation (§1-4)	Facility §§4, 19-21, Activity §32	N	
12.2 Ventilation (§5-8)	Facility §13	N	
12.3 Room temperature (§9-11)	Facility §13, Activity §37	N	
12.4 Floors, walls and ceilings (§12-14)	Facility §59	N	
12.5 Transparent or translucent surfaces (§15)	Facility §59	N	
12.6 Roofs (§16)	Facility §§4, 59	N	
12.7 Lighting (§17-20)	Facility §24	N	
12.8 Windows and skylights (§21-22)	Facility §59	N	
12.9 Doors and gates (§23-30)	Facility §§12, 27, 32, 59	N	
12.10 Traffic routes (§31-35)	Facility §12	N	
12.11 Danger areas (§36)	Facility §§25, 27, Activity §§38, 41	N	
12.12 Rooms, dimension, movement (§37-38)	Facility §59, Activity §31	N	
12.13 Rest rooms (§39-43)	Facility §59	N	
12.14 Outdoor workplaces (§44-46)	Facility §§21-24	N	
12.15 Pregnant women and nursing mothers (§47)	Activity §31	N	
12.16 People w/disabilities (§48)	Activity §31	N	
12.17 Sanitary fac. (§49-55)	Facility §59	N	
12.18 Showers and washing fac. (§56)	Facility §59	N	
12.19 Lavatories and washbasins (§57-58)	Facility §59	N	
12.20 Accommodations (§59-66)	Facility §§22-25, 59, 62, Activity §§32-36	N	

RELATIONS BETWEEN *THE DESIGN AND CONSTRUCTION REGS.* AND NORWEGIAN REGULATION

DCR	Norwegian regulation	Gap (Y/N)	Comments
12.21 Noise and vibration of plant (§67)	Facility §§22-23, Activity §36, 41	N	
§ 13 General duty	N/A		Operator related
§ 14 Assessment of conditions below ground	N/A		Operator related
§ 15 Design with a view to suspension and abandonment	N/A		Operator related
§ 16 Materials	Facility §11	N	
§ 17 Well control	Facility §§47-48	N	
§ 18 Arrangements for examination	Activity §§48, 76-79	N	
§ 19 Provision of drilling etc information	Activity §75, Information §17	N	
§ 20 Co-operation	Frame §11	N	
§ 21 Information, instruction, training and supervision	Activity §§ 19-22, 27,41	N	
§ 22 Defence	N/A		Regime related
§ 23 Certificates of exemption	Frame §59	N	
§ 24 Transitional provision	N/A	N	
§ 25 Repeal of section 3 of the Mining Workings (Offshore Installations) Act 1971	N/A		Regime related
§ 26 Modification of the Offshore Installations (Safety Case) Regulations 1992	N/A		Regime related
§ 27 Revocation	N/A		Regime related

**RELATIONS BETWEEN *THE DESIGN AND CONSTRUCTION REGS.*
AND NORWEGIAN REGULATION**

DCR	Norwegian regulation	Gap (Y/N)	Comments
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***Appendix 9 Matrix HSE Prevention of Fire & Explosion and
Emergency Response Regulations (PFEER)***

RELATIONS BETWEEN *THE PREVENTION OF FIRE AND EXPLOSION AND EMERGENCY RESPONSE REGS.* AND NORWEGIAN REGULATION

PFEER	Norwegian regulation	Gap (Y/N)	Comments
§ 1 Citation and commencement	N/A		Regime related
§ 2 Interpretation	N/A		Regime related
§ 3 Application	N/A		Regime related
§ 4 General duty	Frame §5	N	
§ 5 Assessment	Frame §9, Management §§ 8, 13-15	N	
§ 6 Preparation for emergencies	Activity §§21, 64-68	N	
§ 7 Equipment for helicopter emergencies	Facility §71	N	
§ 8 Emergency response plan	Activity §§66-68	N	
§ 9 Prevention of fire and explosion	Facility §§4, 15, 28-30, 79, Activity §§66-68	N	
§ 10 Detection of incidents	Facility §16, 31	N	
§ 11 Communication	Facility §§17-18	Y	Toxic gas signals, variable frequency
§ 12 Control of emergencies	Facility §§ 28-32, 34-36, 38, 39, 45 , Activity §§66-67	N	
§ 13 Mitigation of fire and explosion	Facility §§ 28-32, 35, 36, 45	N	
§ 14 Muster areas etc.	Facility §§6, 12, 27, 37, 59, 61, 71, Activity §§66-67	N	
§ 15 Arrangements for evacuation	Facility §§40, 42-44, 71, Activity §§66-67	N	
§ 16 Means of escape	Facility §§43,44	N	
§ 17 Arrangements for recovery and rescue	Facility §§40, 42	N	
§ 18 Suitability of personal protective equipment for use in an emergency	Facility §§44, 45	N	
§ 19 Suitability and condition of plant	Facility §§3,4, 9-11, Activity §§23, 29, 42-47	N	
§ 20 Life-saving appliances	Facility §§44, 45	N	
§ 21 Information regarding plant	Management §12, Activity §§39, 41	N	
§ 22 Certificates of exemption	Frame §59	N	
§ 23 Amendment of the Offshore Installations (Safety Representatives and Safety Committees) Regulations	N/A		Regime related
§ 24 Amendment of the Offshore Installations (Safety Case) Regulations	N/A		Regime related
§ 25 Revocation	N/A		Regime related

RELATIONS BETWEEN *THE PREVENTION OF FIRE AND EXPLOSION AND EMERGENCY RESPONSE REGS.* AND NORWEGIAN REGULATION

PFEER	Norwegian regulation	Gap (Y/N)	Comments
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***Appendix 10 Matrix HSE Management & Administration
Regulations (MAR)***

RELATIONS BETWEEN *THE MANAGEMENT AND ADMINISTRATION REGS.* AND NORWEGIAN REGULATION

MAR	Norwegian regulation	Gap (Y/N)	Comments
§ 1 Citation and commencement	N/A		Regime related
§ 2 Interpretation	N/A		Regime related
§ 3 Meaning of "offshore installation"	N/A		Regime related
§ 4 Application	N/A		Regime related
§ 5 Notification concerning offshore installations	Information §§1,6	N	
§ 6 Managers	Frame §§ 5,10, Management §11	Y	HSE req. Duty holder to appoint OIM
§ 7 Restraint and putting ashore	Frame §32	Y	OIM authority
§ 8 Co-operation	Frame §11, 30	N	
§ 9 Records	No req. identified	Y	Req. for personnel info.
§ 10 Permits to work	Activity §28	N	
§ 11 Instructions	Frame §13, Management §§3,10	N	
§ 12 Communication	Facility §§17,18, Activity §71	N	
§ 13 Helicopters	Management §11, Activity §19, Facility §71	Y	HLO
§ 14 Operational information	Activity §47	N	
§ 15 Information to persons	Management §12	N	HSE Phone no.
§ 16 Health surveillance	Activity §§4,7	N	
§ 17 Drinking water	Activity §11	N	
§ 18 Provisions	Frame §12, Activity §11	N	
§ 19 Identification of the offshore installation	Facility §72	N	
§ 20 Certificates of exemption	Frame §59	N	
§ 21 Application of the Employers' Liability (Compulsory Insurance) Act 1969	Frame §5	N	Lov om yrkesskadeforsikring mv.
§ 22 Repeals and modifications of the 1971 Act	N/A		Regime related
§ 23 Revocation and modification of instruments	N/A		Regime related

Appendix 11 Matrix HSE Pipeline Safety Regulations (PSR)

RELATIONS BETWEEN *THE PIPELINES SAFETY REGS.* AND NORWEGIAN REGULATION

PSR	Norwegian regulation	Gap (Y/N)	Comments
§ 1 Citation and commencement	N/A		Regime related
§ 2 Interpretation	N/A		Regime related
§ 3 Meaning of "pipeline"	N/A		Regime related
§ 4 Application	N/A		Regime related
§ 5 Design of a pipeline	Facility §58	N	
§ 6 Safety systems	Facility §§7, 58, Activity §§29, 47	N	
§ 7 Access for examination and maintenance	Facility §58, Activity §47	N	
§ 8 Materials	Facility §§11, 58	N	
§ 9 Construction and installation	Facility §58	N	
§ 10 Work on a pipeline	Management §10, Facility §58, Activity §47	N	
§ 11 Operation of a pipeline	Management §10, Facility §58, Activity §§29, 47	N	
§ 12 Arrangements for incidents and emergencies	Activity §§27, 68, Facility §§32, 58	N	
§ 13 Maintenance	Facility §58, Activity §§ 42-47	N	
§ 14 Decommissioning	Frame §§20, 22, 28, Facility §58, Activity §42	N	
§ 15 Damage to pipeline	Facility §58, Activity §27	N	
§ 16 Prevention of damage to pipelines	Activity §41	N	
§ 17 Co-operation	Frame §§29-30	N	
§ 18 Dangerous fluids	N/A		Regime related
§ 19 Emergency shut-down valves	Facility §§32, 54	N	
§ 20 Notification before construction	Frame §20, Information §§5-6	N	
§ 21 Notification before use	Frame §20, Information §§5-6	N	
§ 22 Notification in other cases	Frame §20, Information §§11, 18	N	
§ 23 Major accident prevention document	Frame §§13, 15, Management §§6, 13-15	N	
§ 24 Emergency procedures	Activity §§21, 66-67	N	
§ 25 Emergency plans in case of major accidents	N/A		Regime/operator related
§ 26 Charge by a local authority for a plan	N/A		Regime related
§ 27 Transitional provision	N/A		Regime related
§ 28 Defence	N/A		Regime related
§ 29 Certificates of exemption	Frame §59	N	
§ 30 Repeal of provisions of the Pipe-lines Act 1962	N/A		Regime related
§ 31 Revocation and modification of instruments	N/A		Regime related

**RELATIONS BETWEEN *THE PIPELINES SAFETY REGS.* AND
NORWEGIAN REGULATION**

PSR	Norwegian regulation	Gap (Y/N)	Comments
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Appendix 12 Matrix HSE Provision and Use of Work Equipment Regulations (PUWER)

RELATIONS BETWEEN *THE PROVISION AND USE OF WORK EQUIPMENT REGS.* AND NORWEGIAN REGULATION

PUWER	Norwegian regulation	Gap (Y/N)	Comments
§ 1 Citation and commencement	N/A		Regime related
§ 2 Interpretation	N/A		Regime related
§ 3 Application	N/A		Regime related
§ 4 Suitability of work equipment	Facility §§ 9, 11, 19-20	N	
§ 5 Maintenance	Management § 21, Activity § 42	N	
§ 6 Inspection	Frame § 15, Management § 21, Activity § 29	N	
§ 7 Specific risks	Management §§11-12, Activity § 41	N	
§ 8 Information and instructions	Management §§10, 12, Activity §§ 22, 41	N	
§ 9 Training	Activity §§ 19-21	N	
§ 10 Conformity with Community req.	Facility §§ 9, 11, 75-82	N	
§ 11 Dangerous parts of machinery	Facility §§ 9, 11	N	
§ 12 Protection against specified hazards	Facility §§ 9, 11, 20, Activity §§ 28, 31, 38-41	N	
§ 13 High or very low temperature	Activity §§ 28, 31	N	
§ 14 Controls for starting or making a significant change in operating conditions	Activity §§ 22, 29	N	
§ 15 Stop controls	Activity §§ 22, 29	N	
§ 16 Emergency stop controls	Activity §§ 22, 29	N	
§ 17 Controls	Activity §§ 22, 29, Facility §§ 16, 27	N	
§ 18 Control systems	Facility §§ 9, 16	N	
§ 19 Isolation from sources of energy	Facility §§ 9, 11, 46	N	
§ 20 Stability	Facility § 63	N	
§ 21 Lighting	Facility § 24	N	
§ 22 Maintenance operations	Activity § 42-46	N	
§ 23 Markings	Facility § 27	N	
§ 24 Warnings	Facility § 27	N	
§ 25 Employees carried on mobile work equipment	Facility § 70, Activity § 83	N	
§ 26 Rolling over of mobile work equipm.	Facility § 70, Activity § 83	N	
§ 27 Overturning of fork-lift trucks	Facility § 70, Activity § 83	N	
§ 28 Self-propelled work equipment	Facility §§ 9, 64	N	
§ 29 Remote-controlled self-propelled work equip.	N/A		Onshore related
§ 30 Drive shafts	Facility §§ 9, 11	N	
§ 31 Power presses to which Part IV does not apply	N/A		Onshore related
§ 32 Thorough examinations of power presses, guards and protection devices	N/A		Onshore related
§ 33 Inspection of guards and protection devices	N/A		Onshore related
§ 34 Reports	N/A		Onshore related
§ 35 Keeping of information	N/A		Onshore related

RELATIONS BETWEEN *THE PROVISION AND USE OF WORK EQUIPMENT REGS.* AND NORWEGIAN REGULATION

PUWER	Norwegian regulation	Gap (Y/N)	Comments
§ 36 Exemption for the armed forces	N/A		Regime related
§ 37 Transitional provision	N/A		Regime related
§ 38 Repeal of enactment	N/A		Regime related
§ 31 Revocation of instruments	N/A		Regime related

Appendix 13 Identified gaps from the NPD regulations

Identified gaps from the NPD regulations

This appendix is structured as follows:

Introductory a general brief discussion of each regulation and for every single gap identified a quotation of the regulation and an evaluation of the gap.

Index

FRAMEWORK HSE REGULATIONS	2
<i>Section 11 - Favourable health, environment and safety culture</i>	2
<i>Section 14 - Qualification and follow-up of other participants</i>	2
<i>Section 16 - Use of the Norwegian language</i>	3
<i>Section 29-30 Emergency preparedness</i>	3
<i>Section 31 - Safety manning in the event of industrial disputes</i>	4
<i>Section 38 - Monitoring of safety zones</i>	4
<i>Section 44 - Several employers at the same workplace, principal enterprise</i>	4
<i>Section 46 - Right of the responsible safety delegate to stop dangerous work</i>	5
<i>Section 47-53 Working hours arrangements and off-duty periods</i>	5
<i>Section 54 - Minimum age</i>	7
MANAGEMENT REGULATION	8
<i>Section 7-9 Monitoring, decision making and planning</i>	8
<i>Section 10 - Work processes</i>	8
<i>Section 16 - Environmental risk and emergency preparedness analyses</i>	9
<i>Section 17 - Analysis of the working environment</i>	9
<i>Section 20 - Handling of non-conformities</i>	10
FACILITY REGULATION.....	11
<i>Section 4 – Design of facilities</i>	11
<i>Section 17 – System for internal and external communication</i>	11
<i>Section 22–23 - Noise and vibration</i>	12
<i>Section 24 - Lighting</i>	12
<i>Section 37 – Emergency power and emergency lighting</i>	13
<i>Section 38 – Ballasting systems</i>	13
<i>Section 39 - Open drainage systems</i>	13
<i>Section 47-51 Drilling and Well Systems</i>	14
<i>Section 55 - Remote operation of pipes and workstrings</i>	15
<i>Section 57 - Main loadbearing Structure</i>	15
<i>Section 59 -Living quarters</i>	15
<i>Section 60 - Health department</i>	16
<i>Section 61 - Emergency hospital</i>	16
<i>Section 62 - Occupational hygiene and drinking water</i>	17
<i>Section 63 - Stability</i>	17
<i>Section 67 - Loading and discharging facilities</i>	18
<i>Section 69 - Exhaust ducts</i>	18
<i>Section 73 - Marking of equipment and cargo</i>	18
<i>Section 77 - Aerosols</i>	18
ACTIVITY REGULATION.....	19
<i>Section 4 - Control of employee's health</i>	19
<i>Section 5 - Recording of work hours</i>	19
<i>Section 6 - Doctor and educated nurse</i>	20
<i>Section 17 - Increase POB in special circumstances</i>	20
<i>Section 30 - Transfer of information</i>	21
<i>Section 48 - Specific requirements to testing of blowout preventer (BOP)</i>	21
<i>Section 56 - Testing and evaluation of chemicals</i>	21
<i>Section 80 - Remote operation of pipes and workstrings</i>	21
<i>Section 81 - Positioning</i>	22
<i>Section 83 - Lifting operations</i>	22
INFORMATION DUTY REGULATION.....	23
<i>Section 1-4 Material and Information</i>	23
<i>Section 11 – Alert and notification</i>	24

Framework HSE regulations

The purpose of these regulations is to

- a) further a high standard in relation to health, environment and safety in the petroleum activities,
- b) achieve a systematic implementation of measures to fulfil the requirements and reach the objectives set out in the legislation relating to health, environment and safety,
- c) further develop and improve the standard in relation to health, environment and safety.

Section 11 - Favourable health, environment and safety culture

The party responsible shall encourage and promote a favourable health, environment and safety culture comprising all activity areas and which contributes to achieving that everyone who takes part in petroleum activities takes on responsibility in relation to health, environment and safety, including also systematic development and improvement of health, environment and safety.

Discussion

Relevant UK requirement is laid down in PFEER Regulation 11. There are no direct requirements towards the environment in the UK. In the UK the philosophy is that through safe design, safe operations and safety management systems the environmental aspects are covered. However, DTI, and not HSE regulate environment. Any MODU moving from UK to Norway should evaluate compliance with this requirement.

Section 14 - Qualification and follow-up of other participants

At the signing of a contract the party responsible shall ensure that the qualifications of contractors and suppliers are adequate to fulfil the legislation requirements in relation to health, environment and safety, and shall follow up on the participants' compliance with the requirements during conduct of the commission in the petroleum activities.

The operator shall ensure that possible shortcomings in connection with other participants' management of health, environment and safety aspects are corrected and that necessary adaptive measures are taken in relation to own and other participants' management system, established according to these regulations Section 13 on duty to establish, follow up and further develop a management system or according to other Norwegian law, in order to ensure the necessary overall considerations.

Discussion

MAR Regulation 8 require contractor employers and any self-employed contractors to co-operate with the owner or operator, e.g. by ensuring that their employees follow instructions. There are no direct requirements towards the qualification of contractors and suppliers in the UK. However, this is covered e.g. by EN-ISO 9001 which normally is a contractual requirement. Any MODU moving from UK to Norway should evaluate compliance with this requirement.

The UKOOA guidelines for Combined Operations section 4.3 give examples for follow-up of contractors and suppliers. UK contractors, as employers, have duties under HSWA, MHSWR etc.

Section 16 - Use of the Norwegian language

The Norwegian language shall be used in the petroleum activities to the maximum extent possible. Other languages may be used if necessary or reasonable for the implementation of the petroleum activities, and provided it does not compromise safety.

Discussion

SRSCR require appropriate language to be used. Any MODU moving from UK to Norway will have to consider the use of Norwegian language.

Section 29-30 Emergency preparedness

Section 29 - Co-ordination of emergency preparedness

The operator shall ensure that the emergency preparedness is co-ordinated when more than one facility or vessel are used simultaneously.

The emergency preparedness measures of the operator shall be suitable for co-ordination with public emergency preparedness resources.

The operator shall manage and co-ordinate the operations of the emergency preparedness resources in the event of accidents and hazardous situations.

The Norwegian Petroleum Directorate and the Norwegian Pollution Control Authority may within their respective areas stipulate a requirement that a standby craft, including aircraft, shall be stationed at facilities or vessels participating in the petroleum activities.

Requirements with regard to the functions that a standby craft is required to execute, may be stipulated.

Section 30 - Co-operation on emergency preparedness

The operators shall co-operate with operators of other production licences on the emergency preparedness against acute pollution. There shall be established regions with common emergency preparedness plans and common emergency preparedness resources. The Norwegian Pollution Control Authority may by individual decisions stipulate more detailed requirements with regard to regions.

The operator shall to the extent necessary co-operate with operators of other production licences to ensure necessary emergency preparedness in the areas of health, working environment and safety. When particular circumstances so warrant, the Norwegian Petroleum Directorate may order and stipulate conditions for such co-operation, including an order to the effect that the financing thereof shall be a collective responsibility.

Discussion

The UK regulations laid down in PFEER regulation 15 covers the intention of the requirements in section 29-30. However, in the UK responsibility is placed on the Duty Holder, which may not be the operator. Environment is governed through the DTI licensing and therefore lies with the operator, other emergency response activities are governed by PFEER regulations 14 to 17 for which the MODU Duty Holder has prime responsibility.

Section 31 - Safety manning in the event of industrial disputes

In the event of industrial disputes the party responsible shall initiate necessary measures to maintain an adequate level of safety.

Agreement shall be concluded with the employees' organisations with regard to safety manning in the event of an industrial dispute. Such agreement shall state:

- a) procedures for establishing safety manning,*
- b) what functions and positions are included the safety manning,*
- c) what constitutes safety work.*

The employees shall participate in necessary safety work according to agreement prior to work being halted.

The safety manning shall be indicated in the general plan for manning of the facility.

Discussion

PFEER Regulation 6 covers only the event of an emergency situation, not industrial disputes. There are no such requirements in the UK for making an agreement with the employees' organisations about safety manning and what constitutes safety work.

Section 38 - Monitoring of safety zones

The operator shall monitor all activity inside safety zones. The operator shall furthermore keep under observation what happens outside the zones when such activity may threaten the safety of the petroleum activities.

Discussion

DCR Regulation 2 and MAR Regulation 3 define the meaning of an offshore installation. In this a 500m zone is defined. We interpret this to meet the intention of the Norwegian safety zone.

PFEER Regulation 10 require equipment and systems to detect and monitor approaching vessels, incoming helicopter flights etc. This is interpreted to meet the intention of monitoring of safety zones. However in the UK responsibility is placed on the Duty Holder rather than the operator.

Section 44 - Several employers at the same workplace, principal enterprise

The operator is the principal enterprise according to the Working Environment Act § 15.

The operator and the party responsible for the operation of a facility or a manned underwater operation carried out from vessels or facilities, may nevertheless conclude an agreement as to who is to be designated as the principal enterprise.

The principal enterprise is responsible for co-ordinating the safety and environmental work of the individual enterprises and has a particular duty to

- a) ensure the establishment of routines for information exchange between the various groups of employees in the workplace,*
- b) see that all employees are assigned to a safety delegate in the workplace, and that they are given the opportunity to raise issues with the working environment committee,*

c) see that the safety delegate and the safety and health personnel have the necessary insight into the work operations in the workplace,

d) make sure that violations of relevant provisions of the Working Environment Act and supplementary regulations are pointed out and corrected.

Discussion

The requirement for principal enterprise is a unique Norwegian requirement laid down in the Working Environment act.

Any MODU moving from the UK to Norway will have to comply with this regulation.

The HSWA in principle covers the requirements laid down in a).

The SRSCR in principle cover the requirements laid down in b) and c).

The RIDDOR and the SCR Reg 8 in principle cover the requirements laid down in d).

Section 46 - Right of the responsible safety delegate to stop dangerous work

The responsible safety delegate may demand that a work operation or work process is stopped by the person responsible for the operation or the process. Such stopping shall be effectuated immediately if the safety delegate does not accept that alternative measures are taken.

Discussion

SRSCR Regulation 17 require two or more safety representatives. In the UK a safety delegate may make a report to the Duty holder or an inspector, but the safety delegate may not demand to stop dangerous work. Any MODU moving from UK to Norway should evaluate compliance with this requirement.

Section 47-53 Working hours arrangements and off-duty periods

Section 47 - Ordinary working hours

The Working Environment Act Sections 42 to 45 inclusive, Section 46 subsection 1 to 6 inclusive, subsection 8 and Section 47 subsections 1 and 2 are not applicable to the scope of application of these regulations. The Working Environment Act Section 46 subsection 9 is applicable only to employees who have watch duty according to agreement, instructions etc.

This section does not apply to work in leading positions and similar as mentioned in the Working Environment Act Section 41 first paragraph.

Ordinary working hours shall not exceed twelve hours per day (24-hour period) and 36 hours a week in average over a period of maximum one year.

Trade unions entitled to submit recommendations, cf. the Working Environment Act Section 41 fifth paragraph, may conclude wage agreements relating to the arrangement of ordinary working hours, notwithstanding the limitations mentioned in the third paragraph in relation to the extent of working hours. Employers may make the provisions of the agreement with regard to working hours applicable to all employees who perform work of such nature as comprised by the agreement, provided the Ministry of Labour and Government Administration gives its consent.

The Ministry of Labour and Government Administration may decide that what is stipulated in the fourth paragraph shall also apply to employees' associations not entitled to submit recommendations, but which organise employees in several enterprises, and which do not have a restricted geographic field of activity.

With regard to employees on mobile facilities registered in the shipping register of a foreign state, the Ministry of Labour and Government Administration may decide that provisions on working hours stipulated in wage agreements applicable to comparable enterprises as mentioned in the fourth or fifth paragraph, shall apply correspondingly.

Section 48 - Plans of working hours arrangements and periods of stay

The operator or whoever is responsible for the operation of a facility shall ensure that plans are prepared for the arrangement of working hours and the periods of stay to be practised, applicable to both own employees and the employees of contractors and sub-contractors.

The employees shall be informed of these plans as early as possible, and at the latest when they arrive at the facility.

Section 49 - Travel time and working hours

The time used to travel to and from the workplace at the beginning or the end of each period of work or stay shall not be regarded as working hours.

Section 50 - Rest breaks

Rest breaks shall be of a duration of at least half an hour if the working hours are at least eight hours per day (24-hour period), and one hour when the working hours are at least twelve hours per day (24-hour period). Rest breaks shall be counted as working hours.

The Working Environment Act Section 51 subsection 1 first and second paragraph, subsections 2 and 3 are not applicable to the scope of application of these regulations.

Section 51 - Overtime

The Working Environment Act Section 50 subsection 1 second paragraph, subsection 2 first paragraph and subsection 3 are not applicable to the scope of application of these regulations.

The accumulated working hours, including overtime, shall not exceed 16 hours per day (24-hour period). The overtime shall not exceed 200 hours in a calendar year.

In respect of enterprises bound by wage agreement the employer and the elected representatives of the employees may conclude a written agreement stipulating overtime work up to 300 hours in the course of one calendar year for the individual employee.

This section is not applicable to work in leading positions and similar as referred to in the Working Environment Act Section 41 first paragraph.

Section 52 - Periods of stay

Periods of stay shall not exceed 14 days.

In particular cases as mentioned in the Working Environment Act Section 49 subsection 1 first paragraph, the employer may extend the period of stay by up to seven days for one single period, after consultation with the elected representative of the employees.

In cases as referred to in the second paragraph, the Norwegian Petroleum Directorate may decide to extend the period of stay beyond seven days.

In respect of employees with particular qualifications, the Norwegian Petroleum Directorate may on application approve periods of stay in excess of 14 days in particular cases. A statement from the relevant working environment committee shall accompany the application.

Section 53 - Off-duty periods and time off

Employees participating in the petroleum activities shall have a consecutive off-duty period of at least eight hours between two work periods. Work in leading positions and similar as mentioned in the Working Environment Act Section 41 first paragraph is exempt from this requirement.

Discussion

No specific UK requirements are laid down for section 47-53. However proper risk assessments under the MHSWR Reg 3 and Reg 4, Schedule 1 should be undertaken. The previous SI 1019 is no longer valid. Safety Notice issued by the HSE in 1996 is the only valid requirement at the time. The existing working time directive will be enforceable offshore from 2003.

Any MODU moving from the UK to Norway will have to comply with these regulations.

Section 54 - Minimum age

Employees participating in the petroleum activities according to these regulations shall have turned 18 years of age when they take up work. The Working Environment Act Sections 34 to 40 inclusive are not applicable to the scope of application of these regulations.

Discussion

The UK requirements for protection of young persons in MHSWR Reg 19 requires a risk assessment before young persons may start working. The previous SI 1019 is no longer valid.

Any MODU moving from the UK to Norway will have to comply with these regulations.

Management regulation

Regulations relating to management in the petroleum activities

Section 7-9 Monitoring, decision making and planning

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 success in meeting objectives, cf. Section 4 on objectives and strategies and Section 5 on internal requirements.

The operator or the party responsible for the operation of a facility shall establish indicators to monitor changes and trends in the risk relating to major accidents.

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 defined 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 such decisions, shall be expressed so that they can be followed up.

Section 9 - Planning

The party responsible shall plan the operations in the petroleum activities in accordance with the stipulated objectives, strategies and requirements so that the plans will consider matters relating 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 party 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.

Discussion

There is no such requirement in the UK as the requirement for degree of success in meeting objectives given in section 7.

Requirements laid down in SCR Regulation 8, PFEER Regulations 4-5 and MHSWR Regulation 4 is interpreted to be the same as the requirements for setting goals, decision criteria and planning in section 7-9. However, whilst the Norwegian requirements cover all aspects of HSE, UK requirements are only valid for health and safety. Any MODU moving from UK to Norway should evaluate compliance with these requirements.

Section 10 - Work processes

The party responsible shall ensure that the work processes and the products thereof are in compliance with 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.

Discussion

The requirement to identify and describe work processes laid down in section 10 is a new NPD requirement based on EN-ISO 9001:2000. Hence by implementing EN-ISO 9001:2000 one will comply with this requirement.

There is no such regulatory requirement for identification of processes in the UK. The requirements are to establish appropriate measures to be adequate to achieve the objectives set out in the regulations, including a safety management system. When moving a MODU from the UK to Norway this requirement must be complied with.

Section 16 - Environmental risk and emergency preparedness analyses

Environmentally oriented risk analyses shall be carried out in respect of the facility and the region to which the facility belongs. The analyses shall among other things comprise acute pollution and the background load of the region, and shall be adapted to the analysed activity's contribution to the total risk. It shall be possible to compare the environmental risks from various activities unambiguously.

Environmentally oriented emergency preparedness analyses shall be carried out in respect of the facility and the region to which the facility belongs. Prior to the implementation of the emergency preparedness analyses the operator shall define objectives for the protection of vulnerable priority resources. The analyses shall comprise the categories near to source, open sea, coast and shore zone.

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 explored, cf. the Facilities Regulations Section 41 on material for action against acute pollution.

Discussion

There is no such requirement for environmental risk and emergency preparedness analyses in the UK. When moving a MODU from the UK to Norway this requirement must be complied with.

Section 17 - Analysis of the working environment

Necessary analyses shall be carried out which will secure adequate working environment and provide decision support in the choice of technical, operational and organisational solutions. The analyses shall among other things contribute to improving the health, wellbeing and security of the employees, and to prevent 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.*

Discussion

There is no such requirement for analyses of the working environment in the UK. When moving a MODU from the UK to Norway this requirement must be complied with. However, MHSWR regulation 3 should address at least some of these requirements.

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 compliance with 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 initiated to prevent recurrence of the deviation. The actions shall be followed up and their effect shall be evaluated.

Until non-conformities have been corrected, necessary compensating actions shall be initiated in order to maintain an adequate level of health, environment and safety.

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

The party responsible shall keep a summary of the status of non-conformities in his own activities. The operator or the person responsible for the operation of a facility shall keep an overall summary.

Discussion

There is no such requirement for handling of non-conformities in the UK. The UK regulations only states how the HSE will give certificates of exemption.

When operating a MODU in Norway this requirement must be complied with.

Facility regulation

Regulations relating to design and outfitting of facilities etc. in the petroleum activities.

Section 4 – Design of facilities

Facilities shall be based on robust and the simplest possible solutions and shall be designed so that

- a) they can withstand loads as mentioned in Section 10 on loads, load effects and resistance,*
- b) the major accident risk becomes as low as practically possible,*
- c) failure of a component, a system or one single mistake does not lead to unacceptable consequences,*
- d) the main safety functions, as mentioned in Section 6 on main safety functions, are maintained,*
- e) transport and handling of materials can take place efficiently with adequate safety, cf. Section 12 on handling of materials and transport routes, access and evacuation routes,*
- f) provision is made for an adequate working environment, cf. Chapter III-II on design requirements to work areas and accommodation areas,*
- g) adequate consideration is given to operational prerequisites and limitations,*
- h) provision is made for health related aspects to be adequately provided for,*
- i) provision is made for the lowest possible risk of pollution,*
- j) provision is made for adequate maintenance.*

Measures to protect facilities against fire and explosion shall be based on a strategy.

The areas on the facility shall be classified in such way that design and location of areas and equipment contribute to reducing the risk related to fire and explosion.

Areas where personnel are staying, or where equipment of importance to safety is placed, shall not be within reach of waves with an annual probability greater than 1×10^{-2} .

Discussion

Relevant UK requirements for this section are laid down in DCR Regulation 5, Introduction and Schedule 1 and PFEER Regulation 5.

UK regulations do not cover the entire NPD requirements laid down in section 4 c,d,f,h and i
Section 4 c) There is no such specific requirement in the UK relating to one single mistake leading to unacceptable consequences.

Section 4 d) There is no such detailed requirement in the UK relating to main safety functions
Section 4 f), h) The guidelines for this section refer to ISO13702, NORSOK S-001 and S-002N for fulfilling the intention of the requirements for health and working environment. Any MODU moving from the UK to Norway must evaluate compliance with these standards.

Section 4 i) There is no such requirement in the UK relating to risk of pollution.

Section 17 – System for internal and external communication

Temporarily or permanently manned facilities shall be equipped with communication systems making internal communication on the facility, as well as between the facility and ships, aircraft and land, possible at all times. Furthermore these facilities shall be equipped with alarm systems capable of alerting the personnel to situations of hazard and accident at all times. It shall be possible to give the following sound and light alarms:

- a) general alarm in the form of intermittent audible signals and yellow flashing light,*
- b) prepare for evacuation in the form of uninterrupted audible signals and yellow flashing light:*

There shall be established at least two independent warning routes to shore, preferably by means of permanent communication systems.

Discussion

Relevant UK requirements for this section are laid down in MAR Regulation 12 and PFEER Regulation 11. The UK requirement for red flashing light for toxic gas is in conflict with the Norwegian requirement for yellow flashing light for all alarms. Any MODU moving from the UK to Norway will have to either comply or apply for an exemption.

Section 22–23 - Noise and vibration

Section 22 - Noise and acoustics

Facilities shall be designed so that no employee is exposed to noise that is harmful to hearing. By noise that is harmful to hearing is meant a daily noise exposure which in the course of a workshift exceeds a twelve-hour equivalent sound level of 83 dB(A), or an impulsive sound level of $L_{peak} = 130$ dB(C).

Requirements shall be specified with regard to noise and acoustics in the individual areas based on the planned manning and the functions to be provided for in the areas. Noise level and acoustics shall not obstruct communication which is of significance to safety. The noise level in cabins, break rooms and recreation rooms shall be reduced as much as possible to contribute to necessary restitution and rest.

Section 23 - Vibrations

Facilities shall be designed so that vibrations will not harm personnel staying on the facility, or will make it difficult for the personnel to carry out important work tasks.

Discussion

Relevant UK requirements for this section are laid down in DCR Regulation 12, Schedule 1 and Noise at Work Regulations (NWR) Regulation 6-7.

The guidelines for section 22 and 23 refer to NORSOK S-002N and NS4931 for fulfilling the intention of the requirements. Any MODU moving from the UK to Norway must evaluate compliance with these standards.

Section 24 - Lighting

Lighting shall be such that working environment and safety considerations are observed in respect of work, movement and restitution.

Daylight in and view from work and accommodation spaces shall if possible be provided.

Discussion

Relevant UK requirements for this section are laid down in DCR Regulation 12, Schedule 1.

The guideline for section 24 refers to NORSOK S-002N for fulfilling the intention of the requirements. Any MODU moving from the UK to Norway must evaluate compliance with this standard.

Section 37 – Emergency power and emergency lighting

Facilities shall have a reliable, robust and simple emergency power system that will ensure sufficient power supply to equipment and systems that must function in the event of a main power failure.

In the changeover between main power and emergency power it shall be ensured that a cut-off does not entail operational problems to the emergency power consumers.

The emergency power system shall have as few automatic disconnection devices as possible in order to ensure continuous operation.

Facilities shall be equipped with emergency lighting which ensures necessary lighting of the facility if the main lighting fails.

Discussion

Relevant UK requirements for this section are laid down in DCR Regulation 4 and 5 and PFEER Regulation 4 and 5. There is no such detailed requirement in the UK relating to emergency power. Any MODU moving from the UK to Norway must evaluate compliance with this requirement.

Section 38 – Ballasting systems

Mobile facilities shall be equipped with a system capable of ballasting any ballast tank under normal operational conditions.

In the event of unintentional flooding of any space adjacent to the sea it shall nevertheless be possible for ballasting to take place.

Ballasting systems shall be in accordance with the Norwegian Maritime Directorate's regulations of 20 December 1991 No.879 concerning ballast systems on mobile offshore units, Section 2 and Sections 7 to 22 inclusive.

Discussion

Relevant UK requirements for this section are laid down in DCR Regulation 5 and 7 and PFEER Regulation 10. There is no such detailed requirement in the UK relating to ballasting systems. However the requirements laid down in section 38 should be covered by the MODUs maritime certificate. MODUs certified by another maritime regulatory scheme than NMD must evaluate compliance with NMD's ballast regulation.

Section 39 - Open drainage systems

Facilities shall be equipped with open drainage systems capable of collecting and drain off oil and chemicals so that the risk of fire, injury to personnel and pollution is reduced.

The system shall be designed so that possible discharges of oil and chemicals will cause as little pollution to the marine environment as possible and so that the requirements contained in the Activities Regulations Chapter X-II are complied with.

Discussion

Relevant UK requirements for this section are laid down in DCR Regulation 4 and 5 and PFEER Regulation 4 and 5. There is no such detailed requirement in the UK relating to emergency power. Any MODU moving from the UK to Norway must evaluate compliance with this requirement.

Section 47-51 Drilling and Well Systems

Section 47 - Well barriers

Well barriers shall be designed so that unintentional influx, crossflow to shallow formation layers and outflow to the external environment is prevented, and so that they do not obstruct ordinary well activities.

When a well is abandoned, the barriers shall be designed so as to maintain well integrity for the longest period of time that the well is expected to be abandoned, inter alia so that outflow from the well or leakages to the external environment do not occur.

Well barriers shall be designed to enable verification of their performance.

Section 48 - Well control equipment

Well control equipment shall be designed and shall be capable of being activated so as to provide for barrier integrity as well as well control. In the case of drilling of top hole sections with riser or conductor, equipment with capacity to conduct shallow gas and formation fluid away from the facility until the personnel has been evacuated shall be installed.

Mobile facilities shall have an alternative activation system for handling of critical functions on the blowout preventer for use in the event of evacuation.

The capacity of accumulators for the well control equipment shall be sufficient to be able to close, open and close all blowout preventers in the well and subsequently have available reserve capacity. Mobile facilities shall have additional capacity to disconnect the lower marine riser package after the shear ram has cut the workstring.

The pressure control equipment used in well interventions shall have remote control valves with mechanical locking devices in closed position. The well intervention equipment shall have a remote control blind/shear ram as close to the christmas tree as possible.

Section 49 - Compensator and disconnection systems

Compensator systems shall be designed so that undesirable locking cannot occur in critical work operations or in situations of hazard and accident.

Mobile facilities shall be equipped with a disconnection system that secures the well and releases the riser before a critical angle occurs.

Section 50 - Drilling fluid system

The drilling fluid system shall be designed so that it will mix, store, circulate and clean a sufficient volume of drilling fluid with the necessary properties to ensure the drilling fluid's drilling and barrier functions.

The high pressure part of the drilling fluid system with associated systems shall in addition have capacity and working pressure to be able to control the well pressure at all times.

Section 51 - Cementing unit

The cementing unit shall be designed so that it will mix, store and deliver as exact volume as possible of cement with the necessary properties to ensure adequate anchoring and barrier integrity. The unit shall be designed so that remains of unmixed chemicals as well as ready-mixed cement is handled in accordance with the principles of the Pollution Control Act.

The high pressure part of the cementing unit with associated systems shall in addition have capacity and working pressure for pressure testing of the well and the well equipment. If the cementing unit with associated systems is intended to function as backup for the drilling fluid system, it shall have capacity and working pressure to be able to control the well pressure at all times.

Discussion

Relevant UK requirements for this section are laid down in PUWER Regulation 4-6, DCR Regulation 4 and 5, PFEER Regulation 4 and 5 and the Boreholes Sites and Operations Regulations. There is no such detailed requirement in the UK relating to drilling and well systems. Any MODU moving from the UK to Norway must evaluate compliance with this requirement.

Section 55 - Remote operation of pipes and workstrings

Drilling and well areas shall be equipped for remote operation of pipes and workstrings

- a) where storage takes place,*
- b) between the storage area and work deck or drillfloor*
- c) on the work deck or drillfloor*
- d) in the derrick.*

The requirement with regard to such remote operation of pipes and workstrings is also applicable to lightweight rigs and snubbing units. With regard to snubbing units the requirement will be made applicable to the extent equipment adapted for such units has been developed and tested.

Discussion

Relevant UK requirements for this section are laid down in LOLER Regulation 3 (The technical guidance on the safe use of lifting equipment, paragraph 336), PUWER Regulation 3-5 and DCR Regulation 4 and 5. The requirement for remote operation of workstrings is addressed by LOLER. However, there are no such detailed requirements in the UK relating to remote operation of pipes and workstrings. Any MODU moving from the UK to Norway must evaluate compliance with this requirement.

Section 57 - Main loadbearing Structure

Main loadbearing structures shall be designed so that single component failure or water penetration through outer walls facing the sea cannot lead to unacceptable consequences.

Discussion

Relevant UK requirements for this section are laid down in DCR Regulation 4 and 12 and PFEER Regulation 9. The principle of single component failure is not addressed in the UK regulations.

Section 59 -Living quarters

The layout and capacity of living quarters shall ensure an adequate living environment and shall be adapted to the various functions to be fulfilled, and the anticipated need for personnel during the various phases of the petroleum activities.

The living quarters shall be arranged so as to maintain an adequate standard of hygiene.

Emergency quarters on simpler facilities with overnight accommodation shall be dimensioned to accommodate the maximum need for personnel. With regard to safety and standard of hygiene, the same requirements apply to simpler facilities with overnight accommodation as those applicable to living quarters.

Discussion

Relevant UK requirements for this section are laid down in DCR Regulation 12, Schedule 1. The guideline for section 59 refers to NORSOK C-001, C-002, S-001 and S-002N for fulfilling the intention of the requirements. Any MODU moving from the UK to Norway must evaluate compliance with these standards.

Section 60 - Health department

Permanently manned facilities shall have a health department. The health department shall be suitable to enable health personnel to perform their duties in an adequate manner.

There shall be equipment on the facility so that adequate first aid and medical treatment can be given on the facility and during transport.

It shall be possible to have telephone contact from the health department with a medical practitioner ashore. There shall be an arrangement for internal communication between the health department and the manned control room. Communication equipment shall be secured against power failure.

In order to maintain vital functions in the event of power failure the health department shall have satisfactory working light and at least two emergency power outlets, cf. Section 37 on emergency power and emergency lighting.

On simpler facilities with overnight accommodation there shall be area space and equipment sufficient to fulfil the requirement in relation to first aid.

Discussion

Relevant UK requirements for this section are laid down in DCR Regulation 12, Schedule 1, MHSWR Regulation 5, MAR Regulation 16 and OFAR Regulation 5, Appendix II. The guideline for section 60 refers to NORSOK C-001 for fulfilling the intention of the requirements. Any MODU moving from the UK to Norway must evaluate compliance with this standard.

Section 61 - Emergency hospital

Permanently manned facilities shall have emergency hospital in addition to a health department.

Treatment capacity shall be in accordance with the defined situations of hazard and accident as mentioned in the Management Regulations Section 15 on quantitative risk analyses and emergency preparedness analyses.

The emergency hospital shall be equipped so that it is able to provide adequate first aid and medical treatment.

Discussion

Relevant UK requirements for this section are laid down in OFAR Regulation 5 paragraph 11. The guideline for section 61 refers to NORSOK C-001 for fulfilling the intention of the requirements. Any MODU moving from the UK to Norway must evaluate compliance with this standard.

Section 62 - Occupational hygiene and drinking water

Supply of food products and drinking water

Water supply facilities in the petroleum activities are subject to the provisions of regulations issued by the Ministry of Health and Social Affairs.

Installations and facilities, including drinking water facilities, shall be designed so that the requirements mentioned in the Activities Regulations Section 11 on food products and potable water are fulfilled. Facilities shall have necessary equipment for control of food products and drinking water.

Discussion

Relevant UK requirements for this section are laid down in DCR Regulation 12, Schedule 1 and MAR Regulation 17. The requirements related to drinking water are covered by MAR Regulation 17.

Regarding occupational hygiene any MODU moving from the UK to Norway must evaluate compliance with the regulations issued by the Ministry of Health and Social Affairs.

Section 63 - Stability

Mobile facilities shall be in accordance with the requirements contained in the Norwegian Maritime Directorate's regulations of 20 December 1991 No. 878 concerning stability, watertight subdivision and watertight/weathertight closing means on mobile offshore units, Sections 8 to 51 inclusive.

There shall be weight control systems on mobile facilities, which shall ensure that weight, weight distribution and centre of gravity are within the design assumptions. Equipment and structural parts shall be secured against displacements that can affect stability.

Discussion

Relevant UK requirements for this section are laid down in DCR Regulation 7. There is no such detailed requirement in the UK relating to stability. However the requirements laid down in section 63 should be covered by the MODUs maritime certificate. MODUs certified by another maritime regulatory scheme than NMD must evaluate compliance with NMD's stability regulation.

Section 67 - Loading and discharging facilities

Loading and discharging facilities for oil and chemicals shall be designed so that the risk of pollution of the external environment is acceptable, cf. the Management Regulations Section 6 on acceptance criteria for major accident risk and environmental risk

Discussion

Relevant UK requirements for this section are laid down in PSR Regulation 6 and PFEER Regulation 9. There is no such detailed requirement in the UK relating to loading and discharging facilities. Any MODU moving from the UK to Norway must evaluate compliance with this requirement.

Section 69 - Exhaust ducts

Exhaust ducts for combustion products shall be placed and designed so that hot surfaces and sparks cannot ignite potential leakages of inflammable fluids and gases, and so that flue gases do not inconvenience personnel, or create dangerous situations to helicopter traffic. Exhaust ducts from atmospheric tanks and containers shall be placed and designed so that discharge of toxic or inflammable gases will not entail increased risk to the personnel or the facility.

Discussion

Relevant UK requirements for this section are laid down in DCR Regulation 4 and 5 and PFEER Regulation 4, 5 and 9. There is no such detailed requirement in the UK relating to exhaust ducts. Any MODU moving from the UK to Norway must evaluate compliance with this requirement.

Section 73 - Marking of equipment and cargo

Cargo and equipment which is transported, or which is used for transport to or from facilities or vessels taking part in the petroleum activities, shall be clearly marked with the name of the owner, facility or vessel.

Discussion

Relevant UK requirements for this section are laid down in PUWER Reg 23, LOLER - Reg 7 related to safety data and the IMDG Code as appropriate. There is no such detailed requirement in the UK relating to name of owner etc. Any MODU moving from the UK to Norway must evaluate compliance with this requirement.

Section 77 - Aerosols

Aerosols as defined in regulations of 1 March 1996 No. 229 relating to aerosols (the Aerosol Regulations) shall be in accordance with the requirements of the Aerosol Regulations, also when such aerosols are used in the petroleum activities.

Discussion

Relevant UK requirements for this section are laid down in PUWER Schedule 1. There is no such detailed requirement in the UK relating to Aerosols. Any MODU moving from the UK to Norway must evaluate compliance with this requirement.

Activity Regulation

Regulations relating to conduct of activities in the petroleum activities.

Section 4 - Control of employee's health

The employer shall ensure that the employees are offered regular medical examinations in order to discover long-term effects of working environment factors.

Employees who have undergone biological examinations shall have access to the results relevant to determine to what degree the person in question has been exposed to health hazardous factors.

The employer shall also ensure that the employees are offered medical examination before they are assigned work which may entail a specific health hazard, to allow preventive actions to be taken, cf. the Working Environment Act Section 14 literas c and d.

Employees who have been subjected to exposure hazardous to health in their work shall be offered separate medical examination if a situation of employment still exists, to allow corrective actions to be taken.

Discussion

Relevant UK requirements for this section are laid down in MAR Regulation 16, MHSWR Regulation 6 and MHSW ACOP §§ 30-33. There is no such detailed requirement in the UK relating to health control. However, the UKOOA guidelines for medical aspects of fitness for offshore work may be used. Any MODU moving from the UK to Norway must evaluate compliance with this requirement.

Section 5 - Recording of work hours

The employer shall establish a recording and follow-up system in respect of work hours for all employees of the individual enterprises. The same applies to personnel with work in leading positions and similar as mentioned in the Working Environment Act Section 41 first paragraph litera a, when the position is of significance to safety.

When work is performed at more than one workplace for the same employer, this employer shall record the total work hours.

The work hours records shall be available to the elected representatives of the employees.

Discussion

No specific UK requirements are laid down for section 5. However, proper risk assessments under the MHSWR Reg 3 and Reg 4, Schedule 1 should be undertaken. The previous SI 1019 is no longer valid. The existing working time directive will be enforceable offshore from 2003.

Any MODU moving from the UK to Norway will have to comply with this regulation.

Section 6 - Doctor and educated nurse

The health service

The operator or the party responsible for the operation of a facility shall ensure that anyone staying on the facility has access to adequate professional health services, cf. the Framework Regulations Section 12: Health related aspects.

A medical practitioner shall have the professional responsibility for the health service.

The number of nurses necessary to assure adequate performance of the tasks and duties assigned to the health service shall be present on the facility at all times.

There shall be an arrangement for other health personnel to be available to the enterprise as required.

The health service shall have an autonomous and independent status in professional matters.

Discussion

Relevant UK requirements for this section are laid down in MHSWR Regulation 3, COSHH Regulation 11, MAR Regulation 16 and OFAR Regulation 5. The section requires an educated practising doctor to be responsible for the health service. Further the section requires the medic on board the installation to be an educated nurse with special training. Relevant UK requirements for this section are addressed in OFAR Regulation 2 and 5. There is not an equivalent requirement in the UK and any company moving a MODU from the UK to Norway will have to comply with these requirements.

Section 17 - Increase POB in special circumstances

Accommodation

The number of persons accommodated on a facility may in particular cases and in consultation with the elected representatives of the employees exceed the number that the facility was designed for, cf. Section 59 of the Facilities Regulations on living quarters.

When decision is made concerning the duration and extent of such accommodation, cf. also the Management Regulations Section 8 on decision basis and decision criteria, the consequences shall be considered and compensating actions shall be initiated to ensure safety and necessary restitution and rest according to Section 31 on adaptation of work, third paragraph.

Discussion

The section gives opening for the number of personnel on the facility to exceed the number that it was designed for. The employee's representatives have to be consulted in such events. There are no such requirements in the UK. Any company moving a MODU from Norway to UK must be aware of this requirement when relevant.

Section 30 - Transfer of information

During shift turnover, the party responsible shall ensure the necessary transfer of information to oncoming personnel on the status of safety systems and ongoing activities, as well as other information of importance to health, environment and safety in the execution of activities.

Discussion

Relevant UK requirements for this section are laid down in MHSWR Regulation 8. There is no such detailed requirement in the UK relating to transfer of information. Any MODU moving from the UK to Norway must evaluate compliance with this requirement.

Section 48 - Specific requirements to testing of blowout preventer (BOP)

The blowout preventer shall be pressure tested to working pressure prior to installation on the well, and subsequently at least once every six months and when segments of or complete blind, seal and shear rams are replaced.

The blowout preventer shall be pressure tested at least every two weeks and be subjected to a weekly function test, cf. also Section 76 on well barriers.

The blowout preventer with associated valves and other pressure control equipment on the facility shall be subjected to a complete overhaul and shall be recertified every five years.

Discussion

Relevant UK requirements for this section are laid down in DCR Regulation 13 and 17, SCR Regulation 15A and PUWER Part II. There is no such detailed requirement in the UK relating to testing of BOP. Any MODU moving from the UK to Norway must evaluate compliance with this requirement.

Section 56 - Testing and evaluation of chemicals

The operator shall ensure that chemicals that are used or discharged have been tested with regard to eco-toxicologic properties.

The operator shall carry out an evaluation of the chemicals in relation to these regulations Appendix 2 on requirements to use and discharge of offshore chemicals, and shall choose the chemicals that represent the smallest potential for harm to the environment when discharged to sea.

Discussion

Relevant UK requirements for this section are laid down in COSHH Regulation 6. There is no such detailed requirement in the UK relating to testing and evaluation of chemicals for this purpose. Any MODU moving from the UK to Norway must evaluate compliance with this requirement.

Section 80 - Remote operation of pipes and workstrings

Remote-operated pipe handling systems for transport, storage and for assembling of pipes and workstrings, shall be used, cf. Section 31 on adaptation of work and the Facilities Regulations Section 55 on remote operation of pipes and workstrings.

Limitations shall be set for the access of personnel to the work area of these remote-operated systems.

There shall be visual contact and radio communication between the person with the control and monitoring function and the personnel inside the work area for these systems. This personnel shall have a corresponding contact and communication between themselves, cf. Section 83 on lifting operations, second paragraph.

Discussion

Relevant UK requirements for this section are laid down in LOLER Regulation 8, PUWER Regulation 3-5 and DCR Regulation 13. The requirement for remote operation of workstrings is addressed by LOLER. However, there are no such detailed requirements in the UK relating to remote operation of pipes and workstrings. Any MODU moving from the UK to Norway must evaluate compliance with this requirement.

Section 81 - Positioning

During conduct of marine operations, the party responsible shall initiate necessary actions so that those who take part in the operations, are not injured, and so that the probability of situations of hazard and accident is reduced.

Requirements shall be stipulated to maintaining position in respect of vessels and facilities during implementation of such operations, and criteria shall be set for startup and suspension of activities.

Discussion

Relevant UK requirements for this section are laid down in MAR Regulation 8. There is no such detailed requirement in the UK relating to positioning. Any MODU moving from the UK to Norway must evaluate compliance with this requirement. However the requirements laid down in section 81 should be covered by the MODUs maritime certificates.

Section 83 - Lifting operations

Lifting operations shall be safety cleared as mentioned in Section 28 on actions during conduct of activities. Cf. Chapter VII on planning and conduct of activities and Section 40 on use of work equipment.

Electronic means of communication shall be used by the personnel participating in lifting operations, and the person responsible shall ensure that the communication takes place in a clear and unambiguous way and without disturbance.

The person responsible shall also ensure that all lifting operations with transfer of personnel are approved by the management of the facility individually.

Discussion

Relevant UK requirements for this section are laid down in LOLER regulation 8-9. There is no equivalent UK requirement to the NPD requirement for electronic means of communication. Any MODU moving from the UK to Norway must evaluate compliance with this requirement.

Information duty regulation

Regulations relating to material and information in the petroleum activities.

Section 1-4 Material and Information

Section 1 Preparation of material and information

Information as mentioned in the Framework Regulations Section 17 on general requirements to material and information, first paragraph, shall as a rule be made available to the supervisory authorities in the form of documents and in a document format which the supervisory authorities can use. A document shall be

- a) a delimited and coherent amount of information,*
 - b) produced for a specific purpose,*
 - c) produced in a recognised storage medium,*
 - d) suitable to subsequent reading, listening, presentation, transfer or other reproduction.*
- With regard to documents in their final version a recognised document format shall be used which ensures that the presentation is not significantly altered by reading, storage or printout.*

Documents that are made available to the supervisory authorities shall clearly show

- a) the person issuing the document and the unit approving it in the organisation producing the document,*
- b) the time of approval,*
- c) whether it is a final or a provisional version.*

Material and information shall be handled with a view to common solutions and subsequent use.

Section 2 Directly available information

Information to be submitted to the supervisory authorities on request may alternatively be made directly available in electronic format in consultation with these authorities. With regard to extent of directly available information, a delimitation in relation to the request shall be carried out.

Section 3 Publicly available information

Reported environmental data as mentioned in the Facilities Regulations Section 16 on instrumentation for monitoring and recording, which are of significance to safety in petroleum activities, shall be publicly available.

The party responsible for the measurements shall make important results from full-scale measurements of loadbearing structures publicly available, at the latest four years after the measurements have been carried out.

Section 4 Retention period and discarding

Material and information according to Section 1 on preparation of material and information shall be retained for the period of time necessary in the interest of prudent petroleum activities. The following is emphasised in particular: a) everyone carrying out underwater contractor activities shall retain the operation log from manned underwater operations for a period of 40 years from the last entry,

b) the operator or the contractor responsible for the operation of a facility shall retain meteorological and oceanographical data until they have been handed over to the Norwegian Meteorological Institute,

- c) the operator shall retain material and information on permanent plugging of wells,*
- d) the operator shall retain material and information on facilities and waste temporarily left on the sea bed,*
- e) the operator shall retain material and information on acute pollution and action to prevent acute pollution with associated subsequent examination,*
- f) the operator shall retain material and information on environment monitoring,*
- g) the operator shall retain material and information on discharge of oil and on consumption and discharge of chemicals,*
- h) the party responsible shall retain material and information on situations of hazard and accident, as well as every serious case of near miss of such situations of hazard and accident,*
- i) the operator and the employer shall retain mapping results showing to what extent employees have been exposed to possible health hazardous working environment factors. The period of retention shall be in proportion to the assumed health hazardous long-term effects of the exposure.*

At the time of expiration or surrender of the production licence and specific licence to install and to operate facilities according to the Petroleum Act Section 4-3, the person with a duty to implement the decision relating to disposal according to the Petroleum Act Section 5-3 shall be responsible for the retention of material and information as mentioned in the first paragraph.

In the decommissioning plan the licensee shall account for the material and the information which the operator is required to retain subsequent to the decision relating to disposal having been implemented.

When the petroleum activities are terminated, the supervisory authorities may require material and information as mentioned in the first paragraph to be handed over to them. Material and information not required to be retained or handed over according to the first to the fourth paragraphs inclusive, may be discarded and scrapped.

Discussion

Relevant UK requirements are laid down in SCR Regulation 15 and MAR Regulation 14. However, SCR regulation 15 cover requirements for documentation related to Safety Case only, whilst the NPD requirements cover all aspects.

MAR regulation 14 covers the requirement in section 3 for collection and keeping of environmental data but not the requirement for making it publicly available.

Any MODU moving from the UK to Norway must evaluate compliance with these requirements.

Section 11 – Alert and notification

*Alert and notification to the supervisory authorities of situations of hazard and accident
The operator shall ensure co-ordinated and immediate telephonic alert to the Norwegian Petroleum Directorate in the following situations:*

- a) severe or acute harm or injury,*
- b) acute life-threatening illness,*
- c) severe impairment or loss of safety functions and barriers endangering the integrity of the facility,*
- d) acute pollution.*

Such alert shall be confirmed in writing within two hours.

The operator shall also ensure co-ordinated and immediate alert of situations which under insignificantly altered circumstances might have led to situations mentioned in the first paragraph literas a to d inclusive.

In the event of situations of hazard and accident as mentioned in the first paragraph literas a to c inclusive, which are of less severe or acute character, the operator shall give written notification individually to the Norwegian Petroleum Directorate on the first working day after the incident or situation occurred or was discovered.

The Norwegian Petroleum Directorate stipulates detailed requirements to the format of the written confirmation as mentioned in the first and second paragraphs, and the notification as mentioned in the third paragraph.

Discussion

Relevant UK requirements are laid down in DCR Regulation 9 and RIDDOR Regulation 3. The UK regulations to a larger extent place responsibility on the Duty holder to report, whilst the Norwegian regulation place more responsibility on the Operator.

Appendix 14 Identified gaps from the HSE regulations

Identified gaps from the HSE regulations

This appendix is structured as follows:
Introductory a general brief discussion of each regulation and for every single gap identified a quotation of the regulation and an evaluation of the gap.

Index

- SAFETY CASE REGULATIONS 1
 - Regulation 5 – Safety Case* 1
 - Regulation 6 – Safety case for combined operations* 2
 - Regulation 15 - Keeping of documents* 2
 - Regulation 15A-B - Verification Scheme - ICP*..... 3
- MANAGEMENT AND ADMINISTRATION REGULATIONS 4
 - Regulation 6 - Managers* 4
 - Regulation 7 - Restraint and putting ashore*..... 5
 - Regulation 9 - Personnel records* 5
 - Regulation 13 - HLO* 5
- PREVENTION OF FIRE AND EXPLOSION AND EMERGENCY RESPONSE REGULATIONS 6
 - Regulation 11 - Signal for toxic gas*..... 6
- DESIGN AND CONSTRUCTION REGULATIONS..... 7
- PIPELINE SAFETY REGULATIONS..... 7
- THE PROVISION AND USE OF WORK EQUIPMENT REGULATIONS..... 7

Safety Case Regulations

The primary aim of the SCR is to reduce the risks from major accident hazards to the health and safety of the work force employed on offshore installations or in connected activities.

Regulation 5 – Safety Case

The owner of a mobile installation shall ensure that the installation is not moved in relevant waters with a view to its being operated there unless –

- a) he has prepared a safety case containing the particulars specified in reg 8 and Schedule 3*
- b) he has sent the safety case to the Executive at least 3 months before the movement of the installation in those waters with a view to its being operated there*
- c) the Executive has accepted the safety case*

Discussion

There is no Norwegian requirement for a safety case to operate in Norway. The AoC is similar but is not yet a requirement and is connected to hydrocarbon related activities and not connected to entering relevant waters. Any MODU moving from Norway to UK territory must prepare a complete safety case regardless of an AoC.

The AoC covers all aspects of the UK regulations relevant for the safety case with the exemptions highlighted in this report. The major difference is the level of detailing and the approach towards compliance. The safety case focus on describing compliance whilst the AoC rather focus on evaluation and follow-up of exemptions.

Relevant NPD requirements are laid down in Framework HSE regulations §§ 3 and 21.

Regulation 6 – Safety case for combined operations

- 1) *In preparing a safety case for an installation pursuant to regulation 4(2) or 5 or a revision thereof pursuant to regulation 9 account need to be taken of the fact that the installation is or is to be engaged in a combined operation with another installation.*
- 2) *The operator of a fixed installation shall ensure that the installation is not engaged in a combined operation with a mobile installation, and the owner of a mobile installation shall ensure that the installation is not engaged in a combined operation with a fixed or mobile installation unless –*
 - a) *the operators of the installations so engaged and the owner of every mobile installation so engaged have prepared and (unless they are the same person) agreed a safety case containing the particulars specified in Schedule 4*
 - b) *the safety case have been sent by an operator to the Executive –*
 - i) *in a case where a mobile installation is to carry out an operation on a well connected to a fixed installation (other than a well which is beneath or immediately adjacent to the installation), at least 4 weeks,*
 - ii) *in any other case 6 weeks,**before the combined operation is commenced, and*
 - c) *the Executive has accepted the Safety Case*

Discussion

There is no Norwegian requirement for a combined safety case to operate in Norway. The AoC do not cover combined operations and for any MODU moving from Norway to UK a combined safety case would have to be an addition, if relevant, regardless of the documentation at hand.

Relevant NPD requirements are laid down in Activity regulations § 26.

Regulation 15 - Keeping of documents

- 1) *An operator or owner who prepares a safety case pursuant to these Regulations shall –*
 - a) *ensure that when the safety case is sent to the Executive it is notified of an address in Great Britain for the purposes of sub-paragraphs b), c) and g) below*
 - b) *keep a copy of the safety case and any revision thereof at the address referred to in sub-paragraph a) above and on the installation to which the safety case relates*
 - c) *keep a copy of each audit report at that address*
 - d) *ensure that in respect of each audit report a written statement is made recording –*
 - i) *the main findings of the report*
 - ii) *the recommendations in the report*
 - iii) *the action proposed to implement those recommendation including the timescales involved*
 - e) *keep a copy of that statement on the installation to which it relates*
 - f) *ensure that a record is made of any action taken in consequence of an audit report*
 - g) *keep a copy of that record at the address referred to in sub-paragraph a) above and on the installation to which it relates*
- 2) *The copy of the audit report, record and written statement referred to in paragraph 1) shall be kept for a period of 3 years after it has been made, and the copy of the safety case and revision referred to in that paragraph shall be kept for so long as it is current*
- 2A) *The operator or owner of an installation shall ensure that –*
 - a) *its verification scheme, any modification of that scheme, and any note made pursuant to regulations 15A(1)(d) or (3)(d) or regulation 15C(b), is kept, at an address in Great*

- Britain notified to the Executive, until the expiration of 6 months after such scheme or, as the case may be, modification of that scheme, has ceased to be current*
- b) *records, sufficient to show the matters described in paragraph 5 of Schedule 9, are kept at the address notified pursuant to sub-paragraph a) of this paragraph until the expiration of 6 months after the scheme, pursuant to which they were compiled, has ceased to be current.*
- 3) *It shall be sufficient compliance with sub-paragraphs b), c), e) and g) of paragraph 1), and with paragraph 2A), for the information in the documents referred to in those sub-paragraphs to be kept at the place referred to therein on film or by electronic means provided that the information is capable of being reproduced as a written copy at that place and it is secure from loss or unauthorised interference.*
- 4) *In this regulation "audit report" means a report made pursuant to the arrangements referred to in regulation 8(1)(b).*

Discussion

The particular requirements for copy of Safety Case and relevant documents at a specific address in Great Britain have no equivalent Norwegian requirement.

Relevant NPD requirements are laid down in Framework HSE regulations §§ 17,18 and in Information Duty regulations §1.

Regulation 15A-B - Verification Scheme - ICP

- (1) *Subject to paragraph (2), the operator of a fixed installation shall, at such time before completion of the design as is identified by regulation 4(1), ensure that -*
- (a) a record is made of the safety-critical elements;*
 - (b) comment on the record by an independent and competent person is invited;*
 - (c) a verification scheme is drawn up by or in consultation with such person;*
 - (d) a note is made of any reservation expressed by such person as to the contents of -*
 - (i) the record; or*
 - (ii) the scheme; and*
 - (e) such scheme is put into effect.*
- (2) *Where, in the case of a fixed installation, the time referred to in paragraph (1) has at the coming into force of this regulation expired, the operator shall ensure that the installation is not operated unless the provisions of sub-paragraphs (a) to (e) of paragraph (1) and regulation 15B have been complied with.*
- (3) *Subject to paragraph (4), the owner of a mobile installation shall, before the installation is moved in relevant waters with a view to its being operated there, ensure that -*
- (a) a record is made of the safety-critical elements;*
 - (b) comment on the record by an independent competent person is invited;*
 - (c) a verification scheme is drawn up by or in consultation with such person;*
 - (d) a note is made of any reservation expressed by such person as to the contents of -*
 - (i) the record; or*
 - (ii) the scheme; and*
 - (e) such scheme is put into effect*

(4) Where, at the coming into force of this regulation, a mobile installation is being operated, the owner shall ensure that it does not continue to be operated unless the provisions of sub-paragraphs (a) to (e) of paragraph (3) and regulation 15B have been complied with

A verification scheme shall provide for the matters specified in Schedule 9 – Matters to be provided for in a verification scheme

Discussion

There is no equivalent Norwegian requirements to the Safety critical elements (SCE), the Verification scheme or and Independent Competent Person (ICP). However the definition of safety functions in the Facility regulations section 1 is similar to that of SCE in section 15A. Further the Management regulations section 1-2 covers the intention of the requirement for safety critical elements.

For MODUs with class the Class Company contribute to cover the intention of the ICP function.

Relevant NPD requirements are laid down in Framework HSE regulations § 15, Management regulations §§1-2 and Facility regulations §1.

Management and Administration Regulations

MAR has reformed the previous legal requirements relating to the management and administration of offshore installations and related activities.

Regulation 6 - Managers

(1) The duty holder shall ensure that –

- (a) the offshore installation is at all times under the charge of a competent person appointed by him to manage on his behalf the installation and the persons on it; and a reference to the installation manager is a reference to such person while he is in charge;*
- (b) the installation manager is provided with appropriate resources to be able to carry out effectively his function, and the duties he may have to discharge under regulation 8; and*
- (c) the identity of the installation manager is known to or readily ascertainable by every person on the installation.*

(2) For the purpose of paragraph (1)(a), a person is not in charge of an offshore installation when he is not on it unless he remains in communication with it and, in case where it might be necessary to exercise his functions, is able to reach it promptly.

Discussion

There are no equivalent Norwegian requirements to the OIM, however the maritime regulations including the ISM code place responsibility on the master, which on any MODU will be the OIM. The NPD regulations have requirements to competence on a general level and management level in specific.

Relevant NPD requirements are laid down in Framework HSE regulations §§ 5,10, Management regulations §11.

Regulation 7 - Restraint and putting ashore

- (1) If an installation manager has reasonable cause to believe that it is necessary or expedient to do so for the purpose of securing the safety of the offshore installation or the safety or health of persons on or near it, he may take such measures against a person on the installation, including –
- (a) *restraint of his person; and*
 - (b) *putting him ashore in the United Kingdom as soon as practicable thereafter,*
- as are reasonable.*
- (2) *If it appears likely that a person will not be put ashore within twenty-four hours of being put under restraint, the installation manager shall forthwith give notice to the duty holder of his being kept under restraint and of the reason for it.*

Discussion

In Norway the OIM do not have the same level of authority related to restraint and putting ashore, however for MODUs carrying a national flag the OIM have the masters authority in accordance with international maritime laws.

Relevant NPD requirements are laid down in Framework HSE regulations § 32.

Regulation 9 - Personnel records

- (1) *The duty holder shall ensure that there is kept on the offshore installation or at a suitable place nearby a record of the persons who are for the time being on, or working from the installation, and containing, in relation to each such person -*
- (a) *his full name; and*
 - (b) *the name and address of his employer, if any,*
- and in this regulation such a record is referred to as “the offshore record”.*
- (2) *The duty holder shall ensure that, as soon as possible after an entry is made in the offshore record, a like entry is made together with the following additional information -*
- (a) *the nationality of the person working on or from the installation;*
 - (b) *his date of birth;*
 - (c) *his usual residence; and*
 - (d) *the name, address and relationship of any next of kin of his,*
- in another record, in this regulation referred to as “the onshore record”.*
- (3) *The duty holder shall ensure that an entry in the onshore record relating to any person is thereafter kept readily available at an address in Great Britain until 28 days after he ceases to be on or to work from the installation.*

Discussion

Norwegian regulations do not require such personnel records to be kept after the personnel leave the installation. Name of person and employer are required to be available offshore for the POB list.

Regulation 13 - HLO

The duty holder shall ensure that –

- (a) *a competent person appointed to be in control of helideck operations on the offshore installation (in these Regulations referred to as “the helicopter landing officer”) is present on the installation;*
- (b) *such person is in control throughout such operations; and*
- (c) *such procedures are established, and plant provided, as will secure, so far as is reasonably practicable, that helideck operations, including the landing and take-off of helicopters, are without risks to health and safety.*

Discussion

NPD do not put forward specific requirements for the HLO such as the requirements in MAR.

Relevant NPD requirements are laid down in Activity regulations § 19, Management regulations §11 and Facility regulations §71.

Prevention of Fire and Explosion and Emergency Response Regulations

PFEER deals with measures to prevent fires and explosions on offshore installations, to protect people from the effects of any which due occur and to secure effective emergency response.

Regulation 11 - Signal for toxic gas

- (1) *The duty holder shall make appropriate arrangements -*
- (a) *for giving warning of an emergency, by audible and, where necessary, visual alarm systems, to all persons on the installation; and*
 - (b) *for the purpose of emergency response, for communication between –*
 - (i) *persons on the installation;*
 - (ii) *the installation and persons not on it and engaged in activities in connection with it; and*
 - (iii) *the installation and persons beyond it;*

and shall ensure that, so far as is reasonably practicable, the arrangements are capable of remaining effective in an emergency.

- (2) *Subject to paragraph (3), the duty holder shall ensure that -*
- (a) *an illuminated sign provided pursuant to paragraph (1)(a) is –*
 - (i) *in the case of a warning of toxic gas, red flashing sign; and*
 - (ii) *in all other cases, yellow flashing sign; and*
 - (b) *an acoustic signal provided pursuant to paragraph (1)(a) is -*
 - (i) *in the case of a warning to prepare for evacuation, a continuous signal of variable frequency;*
 - (ii) *in the case of a warning of toxic gas, a continuous signal of a constant frequency; and*
 - (iii) *in all other cases, an intermittent signal of a constant frequency.*

Where an illuminated sign or acoustic signal is in lawful use immediately before the date of coming into force of these Regulations, but it does not meet the requirements of paragraph (2), it shall be sufficient compliance with that paragraph if a change to a sign or signal so complying is made before 20th December 1997.

Discussion

There is no separate Norwegian requirement for toxic gas signals neither visual nor audible. Further there is no requirement for variable frequency on prepare to abandon alarm. Any MODU moving from Norway to the UK will have to comply with these special UK requirements.

Relevant NPD requirements are laid down Facility regulations §§ 17-18.

Design and Construction Regulations

DCR includes requirements for safeguarding the integrity of an installation throughout its life cycle, from design and construction, through operation and maintenance, to decommissioning and dismantlement.

Discussion

No gaps are identified related to DCR, ref. Chapter 6.1 of the report, which describes the approach of the study.

Pipeline Safety Regulations

PSR lays down duties on pipeline operators relating to the design, construction, operation, maintenance and decommissioning of pipelines.

Discussion

No gaps are identified related to DCR, ref. Chapter 6.1 of the report, which describes the approach of the study.

The Provision and Use of Work Equipment Regulations

PUWER place duties on employers and others to ensure that work equipment does not adversely affect the health and safety of people.

Discussion

No gaps are identified related to DCR, ref. Chapter 6.1 of the report, which describes the approach of the study.