NOPSEMA
Australia's offshore energy regulator

Offshore Infrastructure Regulator

GUIDELINES

Diving Guidelines - Diving Safety Management Systems and Diving Project Plans

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1. Purpose

The purpose of this document is to set guidelines required by both the *Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2024* (OPGGS) (Section 4.4 (1)) and *Offshore Electricity Infrastructure Regulations 2022* (OEI Regulations) (Regulation 168B).

This document also provides guidance for the level of content and detail and workforce consultation and involvement for a Diving Safety Management system (DSMS) and Diving Project Plan (DPP) required by both the OPGGS and OEI Regulations.

2. Background

The OPGGS and OEI Regulations stipulate that a DSMS and a DPP must be in place and current before any diving work is undertaken.

The requirements that apply to diving work under both the OPGGS and the OEI frameworks have been designed to align with one another such that a single DSMS may be submitted for diving work to address regulatory requirements across both frameworks.

Requirements for approval of a DPP will vary depending on the nature of the diving work to be undertaken and must be approved by the relevant OPGGS Act duty holder or OEI Act licence holder who is directing or allowing that diving work to take place.

The Diving Guidelines should be used by industry for the development of a DSMS and DPP, whether working within the OPGGS or OEI jurisdictions.

3. Structure

The Diving Guidelines comprises of the following sections:

a. Sections 1 and 2 - Purpose and Background for setting out the Diving Guidelines

b. Section 4 – DSMS content requirements (OPGGS Section 4 and OEI Regulation 168B)

c. Section 5 – DPP content requirements (OPGGS Section 4.16 and OEI Regulation 169C)

d. Section 6 - Involvement of divers and members of the workforce (OPGGS Section 4.18 and OEI regulation 170A)

e. Section 7 – Abbreviations

f. Section 8 – Supplementary information.

4. DSMS content requirements

Note – Boxes are provided after each element (or sub-element) that refer to the relevant OPGGS and OEI regulation(s)

This section (Section 4) of the Diving Guideline should be used when developing and/or revising a DSMS.

It provides:

- minimum standards of what the DSMS must provide for under Section 4.4(1) of the OPGGS Regulations and subregulation 168B(1) of the OEI Regulations

- DSMS content requirements under Sections 4.4(2), 4.4(3) and 4.4(4) of the OPGGS Regulations and subregulations 168B(2), 168B(3) and 168(B)(4) of the OEI Regulations.

The key elements that must be addressed in a DSMS are described in this section. These elements align with the DSMS concordance table located on the NOPSEMA and OIR websites to assist diving contractors in the development of the DSMS.

4.1. Leadership and Commitment

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(1) **A DSMS for a diving project must meet the minimum standards set out in written guidelines made by NOPSEMA for the purposes of this subsection, as in force from time to time**
OEI subregulation 168B(1) **A DSMS must meet the minimum standards set out in guidelines made by the regulator for this subregulation, as in force from time to time.**

The DSMS must demonstrate a commitment to achieving a high standard of health and safety in the organisation through effective health and safety policies supported by appropriate organisational structures, positive behaviour of individual managers and the promotion of a cooperative effort at each level in the organisation.

4.1.1. Policy and Leadership

Policy

The DSMS must include health and safety policies, including a Health and Safety Policy Statement, authorised by the accountable chief executive.

The policies must:

a. establish a commitment to reduce health and safety risk to as low as reasonably practicable

b. establish compliance with relevant legislation as a minimum requirement

c. include a commitment to develop and maintain appropriate systems and arrangements for the management of safety

d. include arrangements for the periodic review of the policy to ensure its relevance and appropriateness to the organisation's activities

e. be communicated to members of the workforce and interested parties.

Leadership

The DSMS must demonstrate:

a. appropriate senior managers take direct responsibility for coordinating the implementation and maintenance of the health and safety policy

b. there are mechanisms by which managers are held accountable for achievement of the health and safety outcomes established in the policy

c. there are mechanisms that promote the active involvement of all members of the workforce in achieving policy objectives.

4.1.2. Organisation and responsibility

The DSMS must provide for an effective organisational structure for implementation and maintenance of the health and safety policy showing the communication and reporting relationships between the corporate/company organisation and operations.

The DSMS must provide for:

a. specific responsibilities allocated for the management of safety critical procedures and activities, such as diving operations, maintenance, inspection, testing and simultaneous operations

b. documented roles and responsibilities for each organisational unit/level having safety management support responsibility, including responsibilities that bridge across diving contractor and sub-contractor organisations

c. measures to ensure that members of the workforce are informed of their health and safety related roles, responsibilities, accountabilities and authorities

d. measures to verify workforce understanding of, and adherence to, roles, responsibilities, accountabilities and authorities

e. measures to ensure that sufficient competent personnel are available to safely operate the diving project during normal and emergency situations

f. measures to ensure that levels of supervision at a diving project are commensurate with the level of risk associated with the tasks being performed.

4.1.3. Resources

The DSMS must demonstrate that sufficient resources (e.g. financial, human, specialist advisers, etc.) are available to implement the health and safety policy and maintain and improve the DSMS. For example, resources may be required to manage the ongoing assessment of incidents and hazards, various safety initiatives, ongoing training programs, periodic audits (e.g. DSMS, DPP and project audits) and changes to legislation and regulations.

4.2. Planning

The DSMS must provide for a systematic approach to the identification and management of diving project hazards and risk through the establishment of objectives, plans and performance standards that are supported by adequate documentation.

4.2.1. Activities connected with the diving project

Relevant OPGGS and OEI Regulations
OPGGS section 4.4(2) **A DSMS for a diving project must provide for:** **(a) all activities connected with the diving project**
OEI subregulation 168B(2) **A DSMS must provide for:** **(a) all activities connected with a diving project**

The diving contractor must ensure that the DSMS covers all the diving activities that will occur or are likely to occur in undertaking a diving project. For example:

a. diving techniques to be used (e.g. air, nitrox, saturation and atmospheric suit diving)

b. all foreseeable diving activities to be performed (e.g. hyperbaric welding, hot tapping, cutting, HP jetting, etc.).

Understanding and describing the diving techniques used, and activities undertaken, during the diving project is necessary to facilitate subsequent hazard identification and risk assessment processes to ensure risks are managed to ALARP.

4.2.2. Hazard Identification

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(2) **A DSMS for a diving project must provide for:** **(c) the continual and systematic identification of hazards related to a diving project**
OEI subregulation 168B(2) **A DSMS must provide for:** **(c) the continual and systematic identification of hazards related to a diving project**

The DSMS must provide for:

a. systems and processes for the identification of hazards associated with the design, development, operation and completion of the diving project

b. processes and procedures to demonstrate that hazards are systematically assessed and either eliminated or controlled.

The processes and procedures should include:

- details of the scope, methods and timings for the identification (and continual review) of hazards that are relevant to all aspects of a diving project, including emergency response activities
- systems of ensuring appropriate and competent personnel (including the diving project workforce) are involved in the identification of hazards
- systems used to document, review and maintain information obtained during the formal hazard identification process
- communication methods for informing members of the workforce on:
- the risk management system and their role in identifying and controlling hazards and risk at the diving project
- changes in the existing and newly identified hazards on the diving project
- changes in the status of control measures at a diving project.

4.2.3. Hazard assessment

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4 (2) **A DSMS for a diving project must provide for:** **(d) the continual and systematic assessment of:** **(i) the likelihood of the occurrence, during normal or emergency situations, of injury or damage associated with those hazards; and** **(ii) the likely nature of any injury or damage**
OEI subregulation 168B(2) **A DSMS must provide for:** **(d) the continual and systematic assessment of:** **(i) the likelihood of the occurrence, during normal or emergency situations, of injury or damage associated with those hazards; and** **(ii) the likely nature of any injury or damage**

The DSMS must provide for the continual and systematic assessment of the hazards identified during normal or emergency situations.

The DSMS must describe systems for:

a. hazard likelihood and severity acceptance criteria, including the basis for selection during normal and emergency situations
b. identifying the likely nature of the injury or damage for each possible situation
c. methods of ensuring appropriate and competent personnel are involved in the identification of the likelihood and severity of hazard occurrence
d. methods to ensure likelihood and severity analysis is incorporated in the development of controls to ensure risks are managed to ALARP
e. methods used to document, review and maintain information obtained during the formal hazard identification and risk assessment process.

4.2.4. Risk assessment

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(2) **A DSMS for a diving project must provide for:** **(e) the elimination of risks to persons involved with the diving project and associated work including:** **(i) risks arising during evacuation, escape and rescue in case of emergency; and** **(ii) risks to persons involved with the operation arising from equipment and hardware;** **or the reduction of those risks to a level that is as low as reasonably practicable**

OEI subregulation 168B(2)
A DSMS must provide for:
(e) the elimination of risks to workers involved with a diving project and associated work including:
(i) risks arising during evacuation, escape and rescue in case of emergency; and
(ii) risks to workers arising from plant for diving;
or the reduction of those risks to as low as reasonably practicable

The DSMS must include a risk assessment process which is demonstrated to be an integral part of the diving project and provide details how this will be undertaken.

This regulation requires that risks be eliminated or reduced to ALARP. It particularly emphasises that this is to include risks to persons arising during escape, evacuation and rescue in case of emergency, and from operating equipment and hardware.

It must be noted that this requires the diving contractor to eliminate risks. It recognises, however, that in some instances total elimination of risk is not possible because of technological limitations or prohibitive cost. It therefore provides the option of reducing the risks to ALARP, which involves an assessment of relative costs, effectiveness and reliability of different control measures.

In practice, ALARP means that the diving contractor must show through reasoned and supported arguments that there are no other practicable options that could reasonably be adopted to reduce risks further. Further guidance on the concept of ALARP is available in NOPSEMA's guidance note N-04300-GN0166 ALARP.

4.2.5. Objectives, plans and performance standards

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(1) - see above **and** **OPGGS Section 4.4(2)** **A DSMS for a diving project must provide for:** **(i) the performance standards that apply to the DSMS**
OEI subregulation 168B(1) – see above **and** **OEI subregulation 168B(2)** **A DSMS must provide for:** **(h) the performance standards that apply to the DSMS**

The diving contractor must establish, maintain, and monitor measurable and achievable health and safety objectives, plans and performance standards consistent with the company's health and safety policy.

Monitoring health and safety performance must be a line management responsibility and requires:

- active systems that monitor the design, development and installation of management arrangements and risk control strategies

- reactive systems that monitor accidents, ill health, incidents or any other evidence that reports on deficient health and safety performance.

Performance standards are the basis of planning and measuring health and safety achievements. Setting performance standards is an essential process for policies to be translated from good intentions into coordinated activities and tasks.

The DSMS must provide for:

a. the routine development, documentation and implementation of measurable and achievable health and safety objectives for relevant functions and levels within the organisation

b. plans and performance standards that are routinely established for attaining objectives and targets.

Performance standards must:

- set out clearly what people need to do to contribute to an environment which is free of injuries, ill health and loss of life
- form the basis for measuring individual, group and organisational performance
- identify the competencies which individuals need to fulfil their responsibilities
- clearly link responsibilities of position descriptions to specific outputs and deliverables. This may involve applying specific procedures or systems of work and the use of specific documents or equipment and hardware because of legal duties.

For example:

- preparing plans to implement the health and safety policy
- carrying out risk assessments
- periodic monitoring of health and safety performance
- checking contractors' health and safety performance before awarding contracts
- conducting toolbox meetings which many include, for example, a reminder of important health and safety procedure or lessons from a recent incident or accident
- providing training:
  - set timeframes for when training must be done and completed
  - detail the expected training outcomes. Some outputs may relate to legal requirements (e.g. achievement of a certain air quality standard). Alternatively, the output may be satisfactory accomplishment of a specified procedure. Output standards can be used to specify how individuals will be held accountable for their health and safety responsibilities.

c. the implementation of plans to be monitored and performance against standards to be appraised. A balance of leading indicators (e.g. percentage close-out of audit actions, training schedule completion, etc) and lagging indicators (e.g. lost time injury frequency, total recordable case frequency, etc) should be considered

d. plans to be updated to reflect changes in performance standards, or outcomes of appraisals of the systems effectiveness

e. communication to all members of the workforce on the performance of meeting safety objectives, plans and performance standards.

4.2.6. Sources of information (legislative and other standards)

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(1) - see above **and** **OPGGS Section 4.4(3)** **A DSMS for a diving project must provide for:** **(a) specify any standard or code of practice that is to be used in the diving project.** **(b) require the diving to be carried out in accordance with those standards or codes.**
OEI subregulation 168B(1) – see above **and** **OEI subregulation 168B(3)** **A DSMS must:** **(a) specify any standard or code of practice that is to be used in a diving project; and** **(b) require the diving to be carried out in accordance with those standards or codes.**

The DSMS must provide for procedures and arrangements to be in place for the routine identification, collection, update and effective communication of information relevant to health and safety, including:

a. all Australian and international standards or codes of practice that the diving contractor will apply to the design, construction or operation of any relevant plant, systems of work, equipment and hardware associated with diving activities

b. legislation and associated amendments

c. relevant equipment/product information

d. safety alerts and bulletins issued by Regulators and industry bodies (HSE, IMCA, NOPSEMA, OIR)

e. relevant codes of practice (e.g. IMO, IMCA, IOGP)

f. incident and hazard data.

4.2.7. Management system documentation

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(1) - see above
OEI subregulation 168B(1) – see above

The DSMS is a standalone document that must meet the requirements of these guidelines and relevant OPGGS and OEI Regulations.

The DSMS must provide for appropriate manuals, procedures and plans for the management of health and safety and the control of risk during a diving project. The DSMS must detail:

a. the structure of manuals and documents used to manage safety at the diving project

b. arrangements for ensuring documents are current and readily accessible to members of the workforce

c. how the documentation applies to the implementation and use of the DSMS and other relevant documents (e.g. DPP, emergency response plans, etc.).

4.2.8. DSMS providing for preparation of a diving project plan

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(2) **A DSMS for a diving project must provide for:** **(b) the preparation of a diving project plan, in accordance with Part 3, for the diving project (including consultation with members of the workforce in the preparation of the plan) and the revision of the plan as necessary**
OEI subregulation 168B(2) **A DSMS must provide for:** **(b) the preparation of a diving project plan, in accordance with Division 3, for a diving project (including consultation with workers in the preparation of the plan) and the revision of the plan as necessary**

The DPP is a detailed plan developed to manage a specific diving project. It must take into account the specific requirements of the diving scope and dive site, and, where relevant, form a link between the operator's safety case, all other relevant safety cases, any relevant management plans and the DSMS. There may be a diving project that includes multiple facility safety cases. Preparation of any DSMS requires consultation between the relevant duty holders, operators, diving contractor and employees. It must ensure arrangements between the safety management systems are coordinated and clearly understood, and that there is common understanding and agreement on issues such as simultaneous operations and emergency response. The DSMS must also provide for consultation with all members of the workforce in the development and any revisions to the DPP.

The DSMS must describe systems to manage change to a diving project plan that includes the management of change processes described under OPGGS Section 4.4 (4)(b) and OEI Regulation 168B (4), which are also used to manage changes in the DPP.

4.3. Implementation

The DSMS must provide for processes for the management of hazards associated with plant, hardware and equipment.

4.3.1. Design, construction and commissioning

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(1) - see above
OEI subregulation 168B(1) – see above

The DSMS must provide systems that identify hazards and risk associated with the development, construction and commissioning of diving associated plant, equipment and hardware to ensure risks are as low as reasonably practicable (ALARP).

The DSMS must provide for:

a. processes for the design phase of any new plant, equipment or hardware that will be used during the diving project. For example, the incorporation of results from risk assessment studies at each stage of the design, clearly defined responsibilities and the required competencies of personnel involved in the design phase, and communication protocols for ensuring design information is communicated across relevant groups

b. design input parameters and specifications, including appropriate technical standards, safe design criteria, safety performance standards, regulatory requirements, good industry practice and the diving contractor's safety objectives. Consideration should also be given to specific design specifications related to human factors

c. design output parameters that demonstrate:

- how new plant, equipment or hardware meets design specification briefs and industry standards and codes of practice
- identifies how hazards and risk associated with construction, commissioning and operation are identified and assessed
- that operations and maintenance procedures include safety performance standards (for further guidance see NOPSEMA's guideline on control measures and performance standards N04300-GN0271).

d. processes for the review of any plant, equipment or hardware that has been designed for use during a diving project and how relevant and competent personnel are involved in the review process

e. processes to identify whether validation of newly designed equipment, plant or hardware is required prior to commissioning and use.

4.3.2. Purchasing and control of materials and services

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(1) - see above
OEI subregulation 168B(1) – see above

The DSMS must provide for systems and processes for the safe purchasing of materials and services.

Purchased Services

The DSMS must provide for:

a. processes and procedures that incorporate health and safety and legislative requirements when assessing tender specifications and potential contractors to be used

b. arrangements for the review of contractors used in the diving project.

The arrangements must detail:

- mechanisms to involve contractors in hazard identification and risk assessment
- the communication of safety related issues between the diving contractor and contractors
- how responsibilities for emergency response are assessed and managed between contractors and the diving contractor
- how changes to organisation descriptions and roles and responsibilities are determined and communicated
- arrangements in place for assuring contractor competence

c. procedures and arrangements for monitoring the performance of contractors during and on completion of the contract or assigned work. The demonstration must establish the arrangements for:

- supervision, monitoring and auditing of the contractor's performance during operation
- verifying and accepting the work undertaken against the tender specification on completion of the contract.

Materials, equipment and hardware

The DSMS must provide for:

a. purchase specifications and/or purchase orders to incorporate health and safety requirements and comply with relevant technical, design, operational and legislative standards

b. members of the workforce to be consulted prior to the purchase of materials and equipment and hardware with potential health and safety implications

c. procedures for the inspection and verification of materials supplied against the purchase specification

d. processes for the review of operating procedures and practices when purchases of materials, equipment and hardware have health and safety risk implications. The process should also link to change management processes.

e. processes to inform personnel of any health and safety implications associated with purchases. For example: training, provision of additional risk control measures, communication, etc.

4.3.3. Identification of operations, procedures and equipment

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4 (2) **A DSMS for a diving project must provide for:** **(f) the identification of operations, procedures and equipment that are critical to safety**
This regulation is not a requirement of the OEI regulations. **It is recommended licence holders consider the guidance below. See also required content for safe operation procedures in Section 4.3.4.**

The DSMS must identify operations and associated procedures and equipment that will be required to undertake all diving-related work within the diving project, including:

a. all foreseeable diving operations performed under the diving project are identified (e.g. diving operations related to construction, maintenance, inspection, survey and decommissioning activities)

b. the identification of safety critical equipment to facilitate diving operations

c. the identification of safe operational procedures to ensure risks associated with routine and non-routine work. Refer to Section 4.3.4 for further details.

4.3.4. Safe operational procedures

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(1) - see above
OEI subregulation 168B(1) – see above

The DSMS must provide for safe operational procedures to ensure risks associated with routine and non-routine work being performed under different phases of a diving project (e.g. construction, maintenance, inspection, etc.) are managed to ALARP. The DSMS should demonstrate procedures are in place:

a. to manage operational risks from the diving activities described in the DSMS (e.g. air/nitrox diving, saturation diving, surface swimming activities, atmospheric diving systems, surface decompression using oxygen).

The procedures should include sufficient detail, such as:

- appropriate and consistent alignment to standards and codes of practice regarding workforce requirements to maintain a safe dive site (e.g. dive team composition, number of personnel including diving supervisor requirements)
- relevant dive tables that demonstrate that decompression, compression and treatment of decompression illness and barotrauma can be managed safely, and in accordance with established standards and codes of practice
- appropriate discussion of the location of a two-compartment decompression chamber on site to facilitate therapeutic treatment for decompression illness, barotrauma or omitted decompression
- appropriate consideration of the provision of hyperbaric medical advice, industry guidance and good industry practice to determine the suitability of the nominated dive tables, stabilisation periods and emergency breathing rates for all diving operations covered by the DSMS
- contingency plans for any foreseeable emergency, including retrieving injured and unconscious divers from the water

b. for the identification and management for occupational safety critical equipment related to diving. For example, diving equipment (e.g. helmets, etc.), LARS, DCC, lifting appliances (e.g. winches) and communication systems.

c. for the identification and safe management of safety critical equipment that is likely to be used in a diving project. For example, hyperbaric welding systems, pig launchers, installation frames, core drilling and flushing equipment, trenching sleds, overboard handling frames, hot tap drilling.

d. for permit to work (PTW) systems that coordinate and control safe performance for all work activities. Procedures should detail:

- responsible roles and positions under the permit system and associated competency requirements
- processes for permit authorisation, issuing and close-out, including permit validity, handovers and suspensions/cancellations
- distribution and display of permits
- methods for hazard identification and risk management, including locking, tagging and isolation processes/procedures to manage risks
- processes for managing simultaneous operations under a permit system.

e. for the control of safety critical, simultaneous and non-routine activities, including processes for restricting activities when all or parts of key safety systems are unavailable

f. for undertaking diving-related work in a safe manner (e.g. working at heights/over the side, confined space entry, diving from vessels operating in DP mode, underwater oxy-arc operations, high pressure water jetting operations, use of underwater air lift bags, lifting operations)

g. for the inspection, maintenance and operations for safety-critical equipment. For example:

- operation of plant and equipment and hardware, auxiliary equipment
- planned maintenance activities
- breakdown and emergency maintenance activities, etc.

4.3.5. Materials handling and storage

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(1) - see above
OEI subregulation 168B(1) – see above

The DSMS must provide for a safe system for handling and storing of materials. Materials handling includes both lifting equipment and hardware such as cranes, davits, A-frames and lifting gear (e.g. slings, shackles and wires).

The DSMS must provide procedures to ensure:

a. safe movement of material and personnel that involves lifting activities using cranes, hoists, winches and other lifting appliances are carried out in a safe manner in accordance with relevant standards and codes of practice

b. manual handling activities are carried out safely

c. lifting aids (e.g. cranes, winches, tuggers, hoists) and associated gear (e.g. slings, shackles) meet relevant standards and codes of practices

d. inspection, maintenance and repair requirements are described for lifting aids and gear

e. training and competency requirements for personnel responsible for lifting operations and the inspection, maintenance and testing of lifting aids and gear

f. the labelling, handling, storage and disposal of hazardous materials, including reference to relevant standards, registers or manifests required by relevant legislation or international standards or codes.

4.3.6. Planned maintenance

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(2) **A DSMS for a diving project must provide for:** **(g) the inspection and maintenance of, and testing programs for, equipment and hardware integral to the control of those risks**
OEI subregulation 168B(2) **A DSMS must provide for:** **(f) the inspection and maintenance of, and testing programs for, equipment and hardware that is integral to the control of those risks**

The DSMS must describe systems, standards and procedures for maintaining plant, equipment and hardware.

The DSMS must describe:

a. the diving contractor's maintenance philosophy, including how safety critical items are determined and what maintenance procedures are applicable

b. responsibilities for authorising, conducting and supervising maintenance activities

c. how maintenance items are prioritised and how maintenance frequencies are determined

d. the scheduling and control of safety critical equipment and hardware.

For example, maintenance schedules should:

- be consistent with relevant codes and standards and manufacturer's recommendations
- reference the database or register where test and inspection certificates are contained
- the implementation of maintenance activities, including:
- how inspections, maintenance, repair and plant alteration records are maintained
- procedures for the review of hazards and risk associated with maintenance activities and tasks
- how plant, and equipment and hardware requiring registration with external authorities is identified and the procedures to ensure that registration is maintained.

e. procedures for the periodic review of actions against maintenance schedules to verify critical plant maintenance is being undertaken and that equipment and hardware is safe before being returned to service

f. procedures for the reporting, isolation and withdrawal of unsafe plant, equipment and hardware from service

g. mechanisms for the periodic review and improvement of maintenance procedures.

4.3.7. Workforce selection, competency and training

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(1) - see above
OEI subregulation 168B(1) – see above

The DSMS must provide evidence to demonstrate that the diving contractor has processes in place to ensure personnel are trained and competent to perform their functions.

Workforce selection

The DSMS must provide for:

a. processes and procedures for the selection and placement of competent personnel into a particular role, including details of how competence and attributes relating to safety are identified

b. establishing the method for reviewing job and position descriptions and specifications

c. indicating how minimum skills, experience and qualifications of prospective employees are assessed and verified

d. the mechanism for communicating roles and responsibilities to employees.

Competency and training

The DSMS must provide for:

a. allocating adequate resources to training

b. clearly identifying training and development requirements specific to the diving project

c. ensuring health and safety training and competency needs are periodically assessed in conjunction with employees

d. providing training and competency in relevant work and safety critical procedures to new, transferring and existing employees

e. inducting visitors, casual and new employees

f. training materials and competency courses, programs, and modules to be assessed, maintained and current

g. maintaining and reviewing training and competency records (to capture refresher training requirements)

h. reviewing training and competency programs' effectiveness (including verification of employees' competence) and modifying or updating these where necessary.

Competency programs

The DSMS must demonstrate that training and competency programs for each level in the organisation includes:

a. legislative requirements (e.g. OPGGS and OEI), relevant codes of practice (e.g. Australian Diver Accreditation Scheme (ADAS)) and standards

b. appropriate links to the Safety Management Systems (e.g. the DSMS, hazard identification and control, management of change process)

c. job training (e.g. operational procedures, emergency response, health and safety responsibilities, training in areas specified in legislation, and training in the use of personal protective equipment (PPE), hazardous substance handling)

d. induction training (e.g. emergency response, health and safety responsibilities, incident / hazard reporting, permit to work, hazard identification and control, and project-specific training as required)

e. competency assurance of personnel (e.g. diving supervisor) responsible for the implementation of the DSMS, DPP and compliance with regulations.

4.3.8. Workplace environment

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(1) - see above
OEI subregulation 168B(1) – see above

The DSMS must provide processes and procedures to ensure (and promote) a safe working environment is in place during the diving project. This may be relevant to:

a. Toxic contamination - procedures must be in place to ensure the risks to divers from contaminated atmospheres caused by toxic substances such as glues, paints, drillings muds and hydrocarbons are reduced to ALARP

b. Infectious disease – Appropriate management plans must be in place to ensure the risks to diving personnel from infectious diseases are reduced to ALARP

c. Noise levels – Procedures must in place for the identification, assessment and control of noise risks associated with the design, selection and operation of diving plant, equipment and hardware.

d. Personal protective equipment – PPE needs must be assessed and procedures put in place for the selection, issue, training, maintenance and use

e. Temperature control (thermal comfort) – Procedures, plant, equipment and hardware must be in place to ensure that as far as is practicable, heating and cooling is provided to enable members of the workforce to be protected from thermal extremes

f. Hygiene – Procedures must be in place to maintain a hygienic environment for saturation diving living chambers and diving equipment

g. Radiation (Naturally Occurring Radioactive Materials (NORMs)) – Procedures to assess, monitor and manage the potential risks from NORMs associated with the recovery and handling of decommissioned subsea equipment and hardware. For example, specialist technical personnel and equipment to facilitate the survey and inspection of recovered subsea structures; diver and surface personnel familiarisation and training on the risks involved; affected equipment and hardware is tagged and isolated in a barricaded area

h. Hours of work – Procedures for specifying the maximum working hours for all members of the diving team, including diving supervisors and divers. Fatigue management must consider, at a minimum, the bell run duration, lock times, diving depths and refreshment breaks and be informed by current medical advice and industry guidance

i. Lighting and ventilation – Procedures in place to ensure adequate lighting and ventilation levels are assessed and periodically reviewed regarding the location and nature of the work being done. Emergency lighting must be powered by a source independent of primary lighting power source and be immediately available in the event of primary power failure.

4.3.9. First aid and emergency response

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(1) - see above
OEI subregulation 168B(1) – see above

The DSMS must describe the provisions for effective first aid and arrangements for emergency response.

First aid

The DSMS must provide for:

a. medical equipment and hardware available at a diving site to provide first aid and medical treatment for the dive team. The requirements will depend on the type of diving and what is agreed with the diving contractor's medical advisor and in accordance with industry guidance (e.g. Diving Medical Advisory Committee' (DMAC) Guidance Notes)

b. requirements for appropriate up-to-date first-aid qualifications, including oxygen administration

c. the number of diver medics required for any diving project determined by a risk assessment that accounts for team distribution and accessibility (e.g. when divers are in saturation)

d. 24 hour specialised diving medical expertise (the precise details of those arrangements relevant to each project must be detailed within the DPP)

e. established procedures for the ongoing maintenance of first aid equipment and facilities.

Emergency response

All potential emergencies must be identified in the DSMS and the diving contractor must have appropriate procedures in place to manage all aspects of an emergency.

The DSMS must provide for:

a. identification of all emergency response scenarios from the diving project

b. an appropriate description of the onshore and offshore command structures, including the roles and responsibilities of all key personnel associated with the execution of emergency response plans

c. procedures in place to manage all aspects of an emergency, including but not limited to:

- Operations – e.g. search, rescue and recovery operations, accounting for personnel onboard (musters), interface with other emergency response plans (e.g. DPP, specific emergency response sub-plans)
- Communications – to facilitate internal and external information flow
- Notifications – internal and external (government agencies, emergency services, medical experts/facilities)
- Maintenance – emergency equipment, hardware and specialised tools required in the implementation for emergency response
- Training – competency and training requirements for personnel to perform their roles during an emergency
- Recovery – assistance to employees who are exposed to critical incidents at work.

d. a schedule of regular emergency drills and exercises being conducted for each emergency scenario

e. fit for purpose emergency equipment and hardware available at appropriate locations and accessible. The DSMS must describe contingencies in the event of damage/loss or unavailability of equipment and hardware (e.g. loss of power to self-propelled hyperbaric lifeboat (SPHL))

f. the periodic review of the effectiveness of the emergency response system.

Bell emergency recovery

The DSMS must describe the arrangements that are in place to enable a diving bell to be rescued if the bell is severed, including:

a. personnel, plant and procedures to enable a recovery operation

b. where surface diving is required as a means of rescuing a lost bell, a full surface diving system must be available, including a deck decompression chamber (DDC), suitable launch and recovery system (LARS) capable of recovering an unconscious diver to the surface, and any other equipment and hardware needed to reduce risks to the bell rescue diver to ALARP

c. where the use of a remotely operated vehicle (ROV) is required as a means of rescuing a lost bell, the bell must be suitably equipped for ROV intervention and demonstrate that an effective rescue can be implemented

d. provisions and services on-board the bell, independent of the surface, to sustain the bell's occupants for an appropriate amount of time to facilitate rescue.

Hyperbaric Evacuation, Escape and Rescue

The DSMS must describe the arrangements that are in place for the evacuation, escape and rescue of divers from saturation diving, including:

a. hardware used for evacuation (e.g. hyperbaric rescue chamber (HRC), SPHL or similar)

b. the ability to maintain divers under pressure during evacuation when there is more than 18 Bar pressure differential between the divers to be evacuated

c. The requirement for a hyperbaric rescue vehicle (HRV) to facilitate the transport of a HRC, SPHL, or similar to a shore-based hyperbaric reception facility (HRF)

d. SPHL systems and services as necessary to provide autonomous life support for appropriate time frames to facilitate rescue

e. dive tables for the management of divers under emergency scenarios in the SPHL and HRF

f. industry guidance that applies to emergency evacuation and rescue.

Refer to NOPSEMA guidance: N-04300-GN1733 Vessel facilities subject to external hydrocarbon hazards.

4.3.10. Communications

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(2) **A DSMS for a diving project must provide for:** **(h) communications between persons involved in the diving project;**
OEI subregulation 168B(2) **A DSMS must provide for:** **(g) communications between persons involved with a diving project;**

The DSMS must describe:

a. communications systems for the management of health and safety for all personnel involved in a diving project that include:

- diving contractors, duty holders, operators, subcontractors, vessel operators and service suppliers
- all parties involved in simultaneous operations
- onshore and offshore personnel
- emergency management teams applicable to onshore and offshore operations.

b. the methods of communication to obtain and/or inform employees of health and safety issues.

These methods may include:

- formal notifications of health and safety meetings
- toolbox talks
- safety alerts and bulletins
- access to safety representatives and safety information
- health and safety performance reporting
- results of health & safety audits and reviews
- reporting on hazard identification and of incidents and system failures

- reporting on preventative and corrective actions.

c. the methods of communication used to advise personnel of their health and safety related roles, responsibilities, accountabilities and authorities.

4.3.11. Management of change

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(4) **A DSMS for a diving project must contain:** **(b) a system for the management of any changes to the DSMS**
OEI subregulation 168B(4) **The DSMS must contain:** **(b) a system for the management of change**

Management of change is an essential element of a DSMS. Changes can introduce new hazards or impacts on existing levels of risk and associated control measures. A management of change may trigger reviews and formal revisions to the DSMS and an update to the DPP in accordance with OPGGS sections 4.10 and 4.15 and OEI subregulations 168H and 168J.

The DSMS must provide for a management of change process and procedures that considers:

a. how all types of changes and modifications are reviewed and how additional controls are implemented to ensure risks are reduced to ALARP. Processes and procedures should be able to demonstrate:

- how change requests are initiated, processed and authorised
- how change requests are prioritised, and safety and risk implications are assessed
- how the cumulative impact of minor changes is assessed and actioned
- mechanisms for identifying the participation of relevant and competent personnel to attend management of change activities (e.g. risk assessment workshops, reviews, etc.)
- how the workforce affected by change are consulted prior to implementation
- how changes are communicated to interested parties.

b. controlling and managing organisational or work activity changes (e.g. changes in company ownership, organisational structures and reporting requirements, staffing numbers, job task and design, etc.)

c. controlling and managing modifications to plant, equipment, hardware and materials used at a diving project

d. controlling and managing changes to documented work practices and procedures.

4.4. Monitoring and Evaluation

The DSMS must provide for processes to monitor, evaluate and report on the health and safety of personnel involved in the diving project.

4.4.1. Continuous improvement

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(2) **A DSMS for a diving project must provide for:** **(j) a program of continuous improvement**
OIR subregulation 168B(2) **A DSMS must provide for:** **(i) a program of continuous improvement**

The DSMS must provide for continuous improvement so that risks to persons involved with a diving project are eliminated or reduced to ALARP. For example, this may include:

a. formal policy statements committing the organisation to establishing appropriate standards and procedures for the management of projects based on risk assessment and best practice standards for high-risk training and assessment

b. processes for the ongoing monitoring and development of the diving contractor's policies, systems, plant, techniques, equipment and hardware to ensure risks are being managed to ALARP

c. processes that demonstrate that safety performance is continually being assessed against internal key performance indicators and external comparison with local, national and international best practice

d. processes for identifying opportunities for improvement and taking appropriate improvement actions that feeds back into DSMS processes and procedures.

4.4.2. Health monitoring systems

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(1) - see above
OEI subregulation 168B(1) – see above

The DSMS must provide for the monitoring and evaluation of the health of members of the workforce.

The DSMS must provide for processes and procedures for the:

a. identification and implementation of health monitoring programs. These programs should meet legislated requirements for the monitoring and recording of workforce exposure to specified hazards

b. ongoing monitoring and analysis of specific hazards identified while undertaking a diving project. For example, monitoring of noise and hearing loss, hazardous substance exposure, diving related illnesses, etc.

c. ongoing occupational medicals

d. pre- and post-saturation diving medical assessments

e. compression and decompression health monitoring procedures

f. periodic review of health monitoring records and programs.

4.4.3. Incident/hazard investigating reporting.

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(1) - see above
OEI subregulation 168B(1) – see above

The DSMS must provide systems for reporting and investigating hazards and incidents, including:

a. effective systems and procedures for reporting and investigating hazards and incidents and establish measures to prevent recurrence. It must demonstrate that there are investigation processes that:

- establishes how the level of investigations is determined
- specifies the reporting requirements
- describes the roles and responsibilities of employees, supervisors, health and safety representatives and visitors for reporting and investigating incidents
- describes who is involved in the investigation of different categories of incident or accident
- describes how the investigative information is used and reviewed
- describes how the close-out of corrective actions is monitored
- describes how regulatory reporting requirements are satisfied
- describes the methods of informing employees of significant incidents and corrective actions.

b. the training and competency of employees, supervisors, health and safety representatives and managers involved in incident and hazard investigation and reporting.

4.4.4. Health and safety information and reports

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(1) - see above
OEI subregulation 168B(1) – see above

The DSMS must provide for systems for the analysis, dissemination, storage/archiving and retrieval of information relevant to health and safety. The DSMS must demonstrate procedures are in place for:

a. the collection, maintenance, and confidential retention of employee health and safety records. The collection of data should be informed by the following:

- hazard and incident reports
- logbooks
- audit close-out reports

- statistical information
- training records
- measures of injury or loss potential.

b. the collection and analysis of health and safety performance data, including how regular reports on health and safety performance are produced and disseminated to relevant personnel. For example, procedures must specify the method of collecting and analysing incident data to provide information on:

- the location and nature of incidents
- the frequency and severity of incidents
- the effectiveness of hazard and risk controls.

4.5. Auditing and review

The DSMS must provide for auditing and review processes to ensure the DSMS is implemented, effective and continually improving.

4.5.1. DSMS audit

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(1) - see above
OEI subregulation 168B(1) – see above

The DSMS must provide for audit programs and procedures to verify that health and safety management systems are being effectively implemented and meet identified performance standards.

The DSMS must provide for:

a. the schedule of internal and independent audits

b. the methodology for conducting audits, including audit scope and objectives, criteria for selection of audit teams and leaders, and reporting requirements

c. how relevant employees are involved in the audit process

d. procedures for the reporting of audit results and the implementation of corrective actions.

For example:

- corrective actions and findings are recorded and prioritised
- affected employees are made aware of audit results and corrective actions
- corrective actions are reviewed for appropriateness prior to implementation
- follow-up actions are monitored for timely close-out.

4.5.2. Review and improvement

Relevant OPGGS and OEI Regulations
OPGGS Section 4.4(1) - see above
OEI subregulation 168B(1) – see above

The DSMS must describe systems for periodic review of the safety management systems' effectiveness. The description must set out:

a. when reviews take place and who is involved

b. the sources of information used to determine if the system is adequate, policy is complied with, and objectives are being met

c. how the diving contractor makes use of the review

d. how outcomes are communicated to employees

e. what continuous improvement plans exist.

4.5.3. Compliance

OPGGS Section 4.4(4) **A DSMS for a diving project must contain:** **(a) any information that is reasonably necessary to demonstrate that the DSMS complies with this instrument**
OEI subregulation 168B(4) **A DSMS must contain:** **(a) any information that is reasonably necessary to demonstrate that the DSMS complies with these Regulations**

The DSMS must detail how it provides for all the matters specified in the regulations.

The DSMS must provide a DSMS concordance table that clearly references where in the DSMS (and associated appendices, such as a Diving Operations Manual) the OPGGS regulations and OEI subregulations have been met.

5. DPP Content requirements

Section 4.16 of the OPGGS Regulations and Regulation 169C of the OEI Regulations require that a Diving Project Plan (DPP) must be in place and approved by the operator prior to any diving activity taking place, or in the case there is no operator, by NOPSEMA. This section sets out NOPSEMA and OIR guidance to assist the diving contractor in the preparation of a DPP.

NOPSEMA has provided a Diving Project Plan (DPP) concordance table on its website as a tool to assist diving contractors and operators of diving projects to ensure that they have met the DPP contents requirements of the regulations.

5.1. Scope of work

OPGGS Section 4.16(1)

A diving project plan for a diving project must set out in detail the following matters:

(a) a description of the work to be done

OEI subregulation 169C(1)

A diving project plan for a diving project must set out in detail the following matters:

(a) a description of the work to be done

The diving project plan must cover the entire scope of work of the project and general principles of the diving techniques to be used. For example, it should describe:

a. location of diving activities (host facility)

b. the scope of work

c. diving techniques to be used

d. project-specific work methodologies and procedures.

5.2. Relevant legislation

OPGGS Section 4.16(1)

A diving project plan must set out the following matters:

(b) a list of the Commonwealth, and State or Territory, legislation (including this instrument) that is reasonably likely to apply to the diving project;

OEI subregulation 169C(1)

A diving project plan for a diving project must set out in detail the following matters:

(c) a list of the legislation (including these Regulations) that is reasonably likely to apply to the project

The DPP must clearly detail all relevant Acts and Regulations applicable to the area of operation undertaken as part of the diving project.

5.3. Standards and codes of practice

OPGGS Section 4.16(1)

A diving project plan for a diving project must set out in detail the following matters:

(c) a list of standards and codes of practice that will be applied in carrying out the project.

OEI subregulation 169C(1)

A diving project plan for a diving project must set out in detail the following matters:

(d) standards and codes of practice that will be applied in carrying out the project

The DPP must include standards and guidelines identified in the contractor's DSMS and specific guidelines or standards used in the project. For example:

a. AS/NZS and IMCA guidelines applicable to all hyperbaric systems and diving activities to be conducted

b. codes and standards applicable to safety-critical plant, equipment, hardware and project personnel training (e.g. DMAC, IMCA, AS/NZS)

c. other published good industry practice. See section 8.2 for further guidance.

5.4. Hazard identification

OPGGS Section 4.16(1)

A diving project plan must set out the following matters:

(d) hazard identification

OEI subregulation 169C(1)

A diving project plan for a diving project must set out in detail the following matters:

(e) a hazard identification

The diving project plan must detail all hazards that have been identified in relation to the diving project. To achieve this the DPP must:

a. identify hazards in accordance with the hazard identification and risk assessment processes and procedures set out in the DSMS

b. describe hazards associated with all aspects of the diving project and the offshore diving workplace. For example:

- diving generic and site-specific hazards regarding the implementation of the scope of works (e.g. plant, equipment and hardware; environmental conditions, simultaneous operations (SIMOPS))
- diving hazards identified in the DSMS (e.g. occupational hazards, decompression illness)
- diving related major accident events (MAEs) identified in the host facility safety case (e.g. dropped objects, loss of containment)
- diving related MAEs identified in the diving support vessel safety case (e.g. project specific safety critical equipment and procedures)
- diving related MAEs identified in any other safety case related to the project (e.g. associated facilities such as pipelines and wells).

5.5. Risk Assessment

OPGGS Section 4.16(1)

A diving project plan must set out the following matters:

(e) a risk assessment

OEI subregulation 169C(1)

A diving project plan for a diving project must set out in detail the following matters:

(f) a risk assessment

The diving project plan must describe the outcome of the risk assessment of all hazards identified on a diving project that includes:

a. records of the outcomes of the risk assessment carried out

b. detail how all risks will be controlled. This should include:

- a documented assessment of the project-specific hazards and implemented control measures
- risks associated with emergency response and hyperbaric evacuation systems.

c. how the project risk assessment will be reviewed at regular intervals, even if the risk is minimal, to ensure that the risk assessment is still adequate and does not need to be revised. For example, procedures for conducting onsite reviews and updating the risk assessments.

5.6. Safety management plans

OPGGS Section 4.16(1)

A diving project plan must set out the following matters:

(f) a safety management plan

OEI subregulation 169C (1)

A diving project plan for a diving project must set out in detail the following matters:

(g) a safety management plan

The DPP must set out the safety management plan, which makes clear how project specific PTW and SIMOPs systems are to be managed and the procedures that are in operation. Where this involves training related to third party systems, this must also be detailed in the DPP.

5.7. Job hazard analysis

OPGGS Section 4.16(1)

A diving project plan must set out the following matters:

(g) job hazard analyses for the diving operations making up the diving project;

OEI subregulation 169C(1)

A diving project plan for a diving project must set out in detail the following matters:

(h) job hazard analyses for the diving operations included in the project

The DPP must describe how the project will manage job hazard analyses (JHA) for the diving operations.

JHAs must be developed prior to the diving project in consideration of hazard identification and risk assessment to reduce the risks to the diver from plant, equipment and hardware used on a diving project.

JHAs must be reviewed at the work site that involve members of the workforce and encompass the activities associated with each operation. As a minimum requirement, all personnel involved in an activity must understand the JHA processes and outcomes before undertaking the task.

5.8. Emergency response plan

OPGGS Section 4.16(1)

A diving project plan must set out the following matters:

(h) an emergency response plan

OEI subregulation 169C(1)

A diving project plan for a diving project must set out in detail the following matters:

(i) an emergency response plan

The DPP must include an emergency response plan that is project / location specific and reflect combined diving contractor / duty holder/ operator / diving vessel procedures (as applicable). Emergency response arrangements must be discussed and agreed with all relevant parties and the outcomes set out in an emergency response plan that must be included in the DPP.

The emergency response plan must:

a. have clear contents and directions for use

b. contain up to date names and contact information for key positions (personnel) and organisations

c. clearly show the chain of command and lines of communication to be put in place during an emergency

d. define the responsibilities of essential personnel and outline the basic procedures for responding to emergencies

e. ensure all relevant personnel and organisations are kept informed of the plan and any updates

f. demonstrate that all potential emergencies are identified, and procedures and facilities exist for mitigating their effects.

The demonstration must indicate:

- the onshore and offshore command structure to manage the emergency response on the diving project
- the roles and responsibilities of all key employees associated with the execution of the emergency response plan
- how all parties, including external agencies, are consulted regarding the execution of emergency response actions. For example: onshore office, police, maritime agencies and other emergency services
- how conflicting demands are managed where services, equipment and hardware of one contractor are shared by a number of diving contractors, for example emergency and rescue equipment
- the procedures for issuing and maintaining safety and emergency equipment and hardware, and specialised tools
- the procedures in place for search, rescue and recovery operations
- the availability of sufficient numbers of competent emergency trained response team personnel at all times

- the procedures for accounting for all personnel on facilities and vessels during emergency situations
- a schedule of regular emergency drills and exercises are conducted for each emergency scenario.

g. emergency equipment and hardware is fit for purpose and is available at appropriate locations and is accessible. The DPP must indicate contingencies in the event of damage/loss or the unavailability of equipment

h. the effectiveness of the emergency response system is periodically assessed, reviewed and improved.

Hyperbaric evacuation

In an emergency, divers in saturation cannot be evacuated by the same methods as other crew members. The DPP must clearly describe the arrangements and procedures in place to evacuate divers safely while keeping them under pressure. For example, evacuation in a chamber or lifeboat capable of being removed from the worksite to a hyperbaric reception facility (HRF), while maintaining life support for such time as has been determined in the project risk assessment.

Where there is a contingency for the towing and lifting of a hyperbaric rescue chamber (HRC) or a SPHL onto support vessels (e.g. hyperbaric rescue vessel (HRV), platform or road transport) there must be an engineering assessment of the adequacy of the proposed lifting, supporting and transporting systems and a risk assessment of the operation.

Procedures and processes for the rescue and recovery of the SPHL/HRC to a HRV and management of the SPHL/HRC to the HRF must be described in the DPP. They must be trailed and the results included in the DPP.

5.9. Simultaneous operations

OPGGS Section 4.16(1)

A diving project plan must set out the following matters:

(i) a provision of the DSMS and the safety case that are relevant to the diving project, in particular the arrangements in the DSMS and the safety case for simultaneous operations and emergency response

OEI subregulation 169C (1)

A diving project plan for a diving project must set out in detail the following matters:

(j) the provisions of:

(i) the accepted DSMS that covers the project; and

(ii) the management plan (for the OEI licence connected with the project);

that are relevant to the project, particularly provisions of the DSMS and the management plan for simultaneous operations and emergency response;

The DPP must set out the specific requirements of the diving operations and dive site and link to the various safety management systems, including emergency response plans applicable to a single project (e.g. where diving is occurring on a pipeline that is connected to a platform facility managed under a facility safety case).

The DPP must identify simultaneous operations and emergency response scenarios (and activities) and describe how they will be managed during a diving project. In this regard, the DPP should ensure there is a clear link to systems, processes and arrangements in the OPGGS safety case or OEI management plan and the DSMS detailing the management of simultaneous operations and emergency response.

The DPP must also make it clear that where systems, processes and arrangements are in conflict across a DSMS, safety case or management plan particularly those relating to simultaneous operations, permit to work and emergency response, they are discussed with the relevant parties and agreements reached on the processes to be followed.

5.10. Consultation

OPGGS Section 4.16(1)

A diving project plan must set out the following matters:

(j) details of consultation with divers and other members of the workforce working on the project.

OEI subregulation 169C(1)

A diving project plan for a diving project must set out in detail the following matters:

(k) consultation with divers and other workers working on the project.

The DPP must provide details of the consultation that has taken place with divers and other members of the workforce who are involved in the diving project.

The Regulations are based on a fundamental premise that the workforce must be involved in the process of managing the risks to which they are subjected. In relation to diving projects, this involvement typically includes the diving contractor's supervisory and diving personnel who regularly provide input, review and feedback as necessary.

Regarding workforce involvement, it is understood and accepted that the diving workforce is often transient in nature and therefore offshore diving contractors often employ part-time diving personnel, making it a challenge to involve all members of the workforce in the consultation process. However, as a minimum requirement there must be consultation with, and participation of, the diving supervisor(s) and the divers who will, or may be involved in, the diving project.

The degree of employee involvement should be commensurate with the project duration and complexity. For example, the larger or more complicated the project the greater the range of operational personnel would be expected to be consulted.

5.11. Diving operations

OPGGS Section 4.16(2)

The diving project plan must describe each diving operation included in the diving project.

OEI subregulation 169C(2)

The diving project plan must describe each diving operation included in the diving project.

All planned diving operations should be identified in the project plan. Within a diving project, diving operations can be made up of several dives or just a single dive.

5.12. Diving supervision

OPGGS Section 4.16(3)

The diving project plan must not specify as a diving operation a task that is too complex, or too big, to be supervised safely by 1 supervisor.

OEI subregulation 169C(3)

The diving project plan must not specify as a diving operation a task that is too complex, or too big, to be supervised safely by one diving supervisor.

The DPP must provide for an adequate number of diving supervisors to safely manage diving operations across each diving project. For example, if a diving operation involves three or more divers in the water at any one time, or divers working at different depths that cannot be safely controlled by one supervisor, the operation must be divided into separate diving operations with further supervisors being appointed as necessary.

The DPP must specify the areas and duration of the diving operation for each diving supervisor on duty. Each supervisor must have immediate overriding control of all safety aspects for the diving operation under their control. When a supervisor hands over supervisory responsibilities to another supervisor, this must be recorded in the diving operation record.

During a continuous saturation diving project, it is good industry practice to have two supervisors on shift at any one time to provide for appropriate shift and mid bell run handovers, and to act as relief for one another. The name of the supervisor in control must be recorded in the diving operation record with handovers for comfort breaks or other purposes also recorded.

The supervisor has a duty to direct the diving operation safely. If a supervisor does not agree with the size or complexity of the diving operation allocated, the matter must be raised with the diving contractor. A supervisor must not participate in a diving operation that he or she considers to be unsafe.

5.13. Communications

OPGGS Section 4.16(4)

The diving project plan must provide for adequate communications between persons undertaking the project and any relevant:

(a) contractor; and

(b) facility; and

(c) vessel or aircraft; and

(d) on-shore installation.

OIR subregulation 169C(4)

The diving project plan must provide for adequate communications between a person who is directly involved with the diving project and each relevant:

(a) person conducting a business or undertaking; or

(b) worker; or

(c) vessel; or

(d) aircraft; or

(e) onshore installation; or
(f) offshore installation.

The DPP must provide for established communication links between all project sites offshore and onshore, facilities, vessels and aircraft. There must be arrangements for alternative communications links in the event of an emergency. Communication links to relevant shore-based facilities must be provided to ensure emergency response coordination and response can be effectively implemented.

6. Involvement of divers and members of the workforce – OPGGS Section 4.18 and OEI Regulation 170A

6.1. DSMS consultation

OPGGS Section 4.18(1)

In developing or revising a DSMS, a diving contractor must ensure that there is effective consultation with, and participation of, divers and other members of the workforce who will, or may, be working on diving projects for which the DSMS would be appropriate

OIR subregulation 170A(1)

In developing or revising a DSMS, a person conducting a business or undertaking must ensure that there is effective consultation with, and participation of, divers and other workers of kinds the person reasonably considers are likely to work on a diving project for which the DSMS may be appropriate.

Workforce involvement is a requirement under the OPGGS and OEI Regulations for the development of a DSMS. For any safety management system (SMS) to function effectively, active workforce involvement is crucial in the formulation and implementation of the system.

The diving workforce is often transient in nature and therefore diving contractors often employ part-time diving personnel, making it a challenge to involve members of the workforce in the consultation process. However, as a minimum requirement, there must be consultation with, and participation of the diving supervisor(s) and divers who will or may be involved in the diving project. The degree of employee involvement, however, must be commensurate with the project duration and complexity. The larger and/or more complicated the project, the greater the range of operational personnel that must be involved. The DSMS must provide for a process to ensure the workforce involvement is genuine and effective.

6.2. DPP consultation

OPGGS Section 4.18(2)

In developing or revising a diving project plan for a diving project, a diving contractor must ensure that there is effective consultation with, and participation of, divers and other members of the workforce who will, or may, be working on the diving project.

OIR subregulation 170A(2)

In developing or revising a diving project plan for a diving project, a person conducting a business or undertaking must ensure that there is effective consultation with, and participation of, divers and other workers the person reasonably considers are likely to work on the project.

The DPP must demonstrate that:

a. members of the workforce are clearly identified, including diving supervisors, divers, operator representatives and relevant contractors to the diving project

b. effective consultation with identified members of the workforce has been carried out prior to the commencement of any diving project

c. details of any submissions or substantive comments relevant to the development of the DPP made during the consultation process

d. any changes (including the addition of new material) made to the DPP as a result of the consultation.

6.3. Consultation details

OPGGS Section 4.18(3)

When giving a DSMS to the regulator for acceptance, a person conducting a business or undertaking must set out in writing details of the consultation that has taken place, including:

(a) submissions or comments made during the consultation; and

(b) any changes that have been made to the DSMS as a result of the consultation.

OIR subregulation 170A(3)

When giving a DSMS to the regulator for acceptance, a person conducting a business or undertaking must set out in writing details of the consultation that has taken place, including:

(a) submissions or comments made during the consultation; and

(b) any changes that have been made to the DSMS as a result of the consultation.

The DSMS must demonstrate that appropriate consultation has taken place and include details of:

a. any submissions or substantive comments relevant to the development of the DSMS made during the process

b. any changes (including the addition of new material) made to the DSMS as a result of the consultation.

7. Abbreviations

ADAS	Australian Diver Accreditation Scheme
ALARP	as low as reasonably practicable
AS/NZS	Australian/New Zealand Standards
DDC	deck decompression chamber
DMAC	Diving Medical Advisory Committee (IMCA)
DPP	diving project plan
DSMS	diving safety management system
HRC	hyperbaric rescue chamber
HRF	hyperbaric reception facility
HRV	hyperbaric rescue vehicle

IMCA	International Marine Contractors Association
JHA	job hazard analysis
LARS	launch and recovery system
NITROX	Air in which the 21% O2, 79% N2 has been changed, usually enriched air
PPE	personal protective equipment
PTW	permit to work
ROV	remotely operated vehicle
SIMOPS	simultaneous operations
SPHL	self-propelled hyperbaric lifeboat

8. Supplementary information sources

8.1. NOPSEMA guidance and publications

8.1.1. Legislation

A copy of the Acts and the Regulations (a legislative instrument) can be found at https://www.legislation.gov.au/.

8.1.2. Diving specific publications

Documents published by NOPSEMA that are relevant to diving operations are available on NOPSEMA's website at https://www.nopsema.gov.au/safety/diving-operations/ and include the following:

- Register of diving safety management systems and diving project plans
- Diving submission assessment policy (N-04500-PL0054)
- Diving project plan concordance table (N-04500-FM1453)
- Diving safety management system concordance tables (N-04500-FM0711)
- Diving safety management system submission cover sheet (N-04500-FM1000).

8.1.3. General publications

Other documents published by NOPSEMA that diving contractors and operators must consider when preparing and implementing a DSMS and/or DPP are available on NOPSEMA's website at https://www.nopsema.gov.au/safety/safety-resources/ and include:

- Assessment policy (N-04000-PL0050)
- Making submissions to NOPSEMA guideline (N-04000-GL0225)
- Hazard identification guidance note (N-04300-GN0107)
- Risk assessment guidance note (N-04300-GN0165)
- ALARP guidance note (N-04300-GN0166)
- Control measures and performance standards guidance note (N-04300-GN0271)
- Involving the workforce guidance note (N-04300-GN1054)
- Emergency planning guidance note (N-04300-GN1053)

8.2. Australian and international guidance and publications

8.2.1. UK Health and Safety Executive

A range of publications, including the UK approved codes of practice and diving information sheets, are available at http://www.hse.gov.uk/diving/index.htm.

8.2.2. International Marine Contractors Association (IMCA)

The IMCA website can be found at https://www.imca-int.com

Relevant publications include the Diving Code of Practice and a range of diving guidance and technical reports in the IMCA 'D' series, published by the Diving Division of IMCA.

The publications of the independent Diving Medical Advisory Committee (DMAC) are also available from the DMAC website at http://www.dmac-diving.org/.

8.2.3. International Maritime Organisation (IMO)

IMO documents in relation to diving are available on the IMO website at http://www.imo.org

8.2.4. International Association of Oil and Gas Producers (IOGP)

The IOGP diving related publications include the following:

- Diving Recommended Practice (Report No. 471)
- Saturation Diving Emergency Hyperbaric Rescue Performance Requirements (Report No. 478).

All IOGP Diving publications can be found at https://www.iogp.org/oil-and-gas-safety/diving/.