

Diving Safety Management System Content and Level of Detail

Document No: N-04500-GL1961 A759378

Date: 15/01/2024

Core concepts

- Diving safety is regulated under Chapter 4 of the Commonwealth Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009 (the OPGGS(S) Regulations) and equivalent State and Territory legislation where powers have been conferred on NOPSEMA.
- The diving safety management system (DSMS) is developed by the diving contractor, in consultation with divers and other members of the workforce.
- The DSMS must meet the minimum standards set out in these guidelines and address the specific requirements of subregulation 4.4.1.
- The diving contractor must be able to demonstrate that in the development (or revision) of the DSMS there has been effective involvement of the workforce. This demonstration must be supported by adequate documentation.
- Before diving operations can commence, the diving contractor must have a DSMS that has been accepted by NOPSEMA and is current.
- The diving contractor must ensure that the diving operation complies with the DSMS.
- The diving contractor must give a copy of the DSMS to the operator of the facility (pipeline, platform, FPSO, etc.) at which the diving activity is being conducted before diving can commence on a diving project.
- The DSMS must be revised before the end of each period of 5 years, commencing from the date of the most recent acceptance by NOPSEMA of a new or revised version of the DSMS, otherwise the DSMS will cease to be current.
- NOPSEMA publishes on its website, a [register](#) of the details of all DSMSs (new and revised) that have been received. The register also includes details of DSMSs that have been rejected and accepted, including particulars of any conditions that may have been imposed on the acceptance.

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1. Abbreviations and acronyms

ALARP	As Low as Reasonably Practicable
AS/NZS	Australian/New Zealand Standards produced by Standards Australia
DMAC	Diving Medical Advisory Committee
DPP	Diving Project Plan
DSMS	Diving Safety Management System
HAZID	Hazard Identification study
HAZOP	Hazard and Operability study
IMCA	International Marine Contractors Association
IMO	International Maritime Organisation
IOGP	International Association of Oil & Gas Producers
ISO	International Standards Organisation
JHA	Job Hazard Analysis
JSA	Job Safety Analysis
MAE	Major accident event
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
OPGGs Act	<i>Offshore Petroleum and Greenhouse Gas Storage Act 2006</i>
OPGGs(S) Regulations	Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009

2. Purpose and Scope

The purpose of this guideline is to assist diving contractors in understanding and complying with the general requirements for preparing a DSMS under OPGGS(S) Regulations.

This document is part of a series of documents that provide guidance to assist operators and diving contractors in understanding and complying with the general requirements for diving projects under the OPGGS(S) Regulations.

The guideline reflects NOPSEMA's interpretation of the requirements of the regulations and is not a substitute for legal advice or detailed consideration of the OPGGS Act and relevant regulations.

This guideline should be read in conjunction with:

- Diving Submission Assessment Policy (N-04500-PL0054)
- Diving – General Guideline (N-04500-GL1222)

- Diving Project Plan Content and Level of Detail Guideline (N-04500-GL1967)

Refer to N-04500-GL1222 “Diving – General” for detailed diving terminology definitions.

The guidance notes are available on the [NOPSEMA website](#), along with guidance on other legislative requirements, such as nomination of operator, safety case content, and notifying and reporting accidents and dangerous occurrences.

Summary tables of the legislative requirements are included as a quick reference throughout this document. **However, the reader is encouraged to work directly from the regulations themselves.** References to regulations in this guideline refer to the OPGGS(S) Regulations unless otherwise specified.

3. Diving Safety Management System Content Requirements

3.1. General

NOPSEMA has provided a concordance table on its website as a tool to assist diving contractors and operators of diving projects to ensure they have met the DSMS content requirements of the regulations.

Operators and diving contractors are encouraged to utilise the [DSMS concordance table](#) as part of their DSMS review and approvals process and to assist the operator in providing a ‘road map’ to which section(s) of the DSMS address the regulatory requirements.



*Further guidance is available in the NOPSEMA form: N-04500-FM0711
“DSMS Concordance Table”*

3.2. Minimum standards set by NOPSEMA

Applicable regulations

Regulation 4.4.1 - DSMS must meet the minimum standards set out in guidelines made by NOPSEMA

The DSMS for diving must be developed, implemented and maintained in accordance with an Australian or internationally recognised code or standard for Safety Management Systems, for example:

- AS/NZS ISO 45001 – Occupational health and safety management systems – Specification with guidance for use; and
- ISO 45001:2018 - Occupational health and safety management systems – Requirements with guidance for use.

Typically, a DSMS should contain the following elements (as outlined in ISO 45001 or similar):

- Context of the Organisation
 - the external and internal issues relevant to its purpose and that affect its safety management system outcomes
 - needs and expectations of its workforce and other parties
 - scope of the safety management system

- Leadership and Work Participation
 - leadership and commitment
 - safety Policy
 - organisation roles, responsibilities and authorities
 - consultation and participation of the workforce
- Planning
 - actions to address risks and opportunities
 - hazard identification and risk assessment
 - determination of legal and other requirements
 - safety objectives and plans to achieve them
- Support
 - resources
 - competence
 - workforce awareness
 - communications (internal, external)
- Documentation (creating and updating, documentation control)
- Operation
 - elimination hazards and reducing risks
 - management of change
 - procurement (product and services including outsourcing)
- Emergency preparedness and response
- Performance evaluation
 - monitoring, measurement analysis and performance evaluation
 - internal audit
 - management review
- Improvement
 - incident, non-conformity and corrective action
 - continual improvement

The DSMS must include policies, procedures, processes and systems. It must also ensure that members of the workforce comply with the provisions of the DSMS and are adequately trained and supervised to do so.

3.3. DSMS Specific Requirements

The DSMS must demonstrate adequate provisions for NOPSEMA to be assured that the DSMS meets the requirements of OPGGS(S) Sub regulation 4.4.2.

The DSMS must be sufficiently broad and detailed to cover all aspects of the management of health and safety during the diving activities and must provide for the effective control of health and safety across all stages of the diving activities.

3.3.1. Provide for all Activities

Applicable regulations

Regulation 4.4(2)(a) - DSMS must provide for all activities connected with a diving project

The DSMS must provide for all activities (e.g. diving operations and controls) connected with a diving project that contribute to reducing the risks to health and safety of people connected with the diving activity. The DSMS must provide the systems specific to the diving operations. For example:

- Training and competency
- Communications
- Hazard identification and risk assessment
- Safe operational and emergency procedures for diving
- Management of change
- Permit to work
- Inspection, testing, maintenance and repair
- Evacuation, escape and rescue
- Performance standards.

The DSMS must provide for all hazards and risks associated with the diving activities.

The DSMS must demonstrate adequate provisions to enable NOPSEMA to be assured that the DSMS meets the requirements of OPGGS(S) subregulation 4.4.2 with respect to diving hazards and risks. Diving contractors should therefore provide systems for effective risk management of diving hazards within the DSMS. This includes how risks are identified, analysed, evaluated, managed, communicated, and monitored to ensure risks associated with diving activities are managed to a level that is as low as reasonably practicable (ALARP).

The DSMS must provide for effective control of health and safety across all stages of the diving activities. The DSMS itself must be sufficiently broad and detailed to cover all aspects of the management of health and safety during the diving activities.

The information must be appropriate to the diving activities to be conducted.

3.3.2. Provide for a DPP

Applicable regulations

Regulation 4.4(2)(b) - DSMS must provide for the preparation of a DPP and the revision of the plan as necessary.

The DSMS must provide for sufficient resources to be made available to develop the DPP implement the health and safety policies and to regularly maintain and improve the plan. It must provide for the DPP to be prepared in accordance with the regulations. The DPP must be appropriate to the diving activities.



Further guidance is available in the NOPSEMA guideline: N-04500-GL1967

"Diving Project Plan Content & Level of Detail"

3.3.3. Identification of Hazards

Applicable regulations

Regulation 4.4(2)(c) - DSMS must provide for the continual and systematic identification of hazards.

The DSMS must include systems (policies, processes and procedures) for continual hazard identification and risk management. The processes and procedures must be adequate for effective hazard identification and risk management processes for all diving related hazards. Examples of diving hazard identification and management systems include:

- Hazard Identification (HAZID) study and Hazard and Operability (HAZOP) study processes
- Job Safety Analysis (JSA)/job hazard analysis (JHA) processes
- Observational hazard identification programs
- Qualitative and quantitative risk assessment processes
- Risk reduction and control evaluation processes
- Inclusion of non-major accident event (non-MAE) examples (e.g. noise, fatigue, mental health, etc.).

The DSMS must provide clear instructions that, by following its content, each hazard will have of control measures that reduce risks to ALARP and these are further defined in the performance standards for each control.

3.3.4. Assessment of Likelihood - Injury or Damage

Applicable regulations

Regulation 4.4(2)(d) - DSMS must provide for the continual and systematic assessment.

The DSMS must provide for the likelihood and consequence of diving related injuries or damage associated with diving activities during normal and emergency situations. The DSMS must demonstrate how the diving contractor assesses the likelihood of injury or damage.

The DSMS must provide for the continual and systematic assessment for any injury or damage that could reasonably be expected.

The DSMS should include systems that demonstrate the likelihood and consequence, for example the diving contractor's risk matrix.

3.3.5. Elimination of Risks to Persons

Applicable regulations

Regulation 4.4(2)(e) - DSMS must provide for the elimination of risks or the reduction to ALARP.

The DSMS must provide plans and procedures for all identified emergency scenarios that could be reasonably expected to occur during each phase of the diving project. The emergency responses should reflect the combined diving contractor and operator procedures/actions considering all other relevant stakeholders.

Emergency response procedures should provide a schedule of regular emergency drills and exercises for each identified emergency scenario and what facilities exist for managing and mitigating their effects.

The DSMS must provide for the identification and documentation of all likely diving related injuries from equipment and hardware by whatever circumstance and include the steps to eliminate such risks. If risk cannot be eliminated or greatly reduced, the principal of ALARP in some instances may be an acceptable alternative but only with agreement with the stakeholders involved.

3.3.6. Inspection, Maintenance and Testing

Applicable regulations

Regulation 4.4(2)(f) - DSMS must provide for the inspection and maintenance of, and testing programs.

The DSMS must provide for a schedule, appropriate to the diving activities being undertaken, for the planned inspection, testing and maintenance of equipment and hardware integral to the physical control measures for those risks. The DSMS must provide descriptions of actual planned arrangements (policies, procedures etc.) for inspection, testing and maintenance. The content and level of detail needs to be adequate to gain an appreciation of inspection, testing and maintenance processes.

The diving contractor must develop, implement and maintain procedures for the identification, collection, review and dissemination of information and standards relevant to the facility and operation of equipment and hardware on the diving project. This should include, but not be limited to indicating:

- criticality and prioritisation of schedule;
- planning programmes that capture's requirements;
- maintenance management software;
- testing of emergency equipment;
- planned maintenance procedures;
- adhering to manufactures operating procedures/daily checks; and
- following time specific inspection, maintenance and testing programmes.

3.3.7. Communications

Applicable regulations

Regulation 4.4(2)(g) - DSMS must provide for communications between persons involved in a diving project.

The DSMS must provide a description of key roles and responsibilities for personnel who are responsible the health and safety of a diving project. Sufficient resources for effective participation and consultative mechanisms that promote active communication and involvement of all personnel and stakeholders on the diving project also need to be described.

The information in the DSMS must provide descriptions of actual planned arrangements (policies, procedures and organigrammes) for communications. The content and level of detail needs to be adequate to gain an appreciation of the communication processes and protocols. The information must be appropriate to the diving project and cover all activities to be conducted at the workplace and should address, as example but not limited to:

- emergency situations;
- simultaneous and combined operations (crane lifts, vessels movements, etc.);
- between dive control, facility back deck and bridge; and
- with other relevant facilities.

3.3.8. Performance Standards

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Regulation 4.4(2)(h) - DSMS must provide the performance standards that apply to the DSMS.

The DSMS must provide for arrangements (policies and procedures) for developing and setting performance standards.

The performance standards provided must address the scope of activities described in the DSMS. In addition, the DSMS must include:

- process for the development of performance standards
- structure and content; for example, the extent to which the following aspects are considered:
 - functionality
 - reliability/availability
 - survivability
 - maintainability
- listing of actual standards
- integration of the performance standards, (e.g. linkages into inspection, testing and maintenance programs and routines, emergency response plans)
- content of performance standards (e.g. samples for both hardware related and procedural controls).

3.3.9. Continuous Improvement

Applicable regulations

Regulation 4.4(2)(i) - DSMS must provide a program of continuous improvement.

The DSMS must provide arrangements (policies and procedures) for the continual and systematic identification of deficiencies in and improvement of the safety management system. It must provide planned arrangements (policies and procedures) for ensuring the ongoing effectiveness of the DSMS.

The policies and procedures must include but not be limited to periodic audits and reviews.

3.4. Standards to be Applied

Applicable regulations

Regulation 4.4.3 - DSMS must specify any standard or code of practice that is to be used.

The DSMS must specify what Australian and/or international standard or code of practice that the diving contractor will apply and be used in the diving activities. Such information is available from a variety of sources, including but not limited to:

- Australian legislation
- Relevant industry standards, for example:
 - Australian & New Zealand Standards (AS/NZS)
 - International Standards Organisation (ISO)
- Codes of Practice, for example:
 - Diving Medical Advisory Committee (DMAC)
 - International Marine Contractors Association (IMCA)
 - International Maritime Organisation (IMO)
 - International Association of Oil & Gas Producers (IOGP).

The DSMS should be regularly reviewed and further developed in conjunction with the latest relevant (applicable) standards, codes and industry guidance material.

3.5. Compliance, Audit and Review

Applicable regulations

Regulation 4.4.4 - DSMS must demonstrate compliance with the regulations and contain a management of change system.

The DSMS must provide policies, procedures to demonstrate compliance with the regulations. The content and level of detail needs to adequately demonstrate the diving contractor has addressed the DSMS requirements, for example:

- Induction and training in the DSMS
- Key performance indicators for the DSMS
- Audit and review processes
- Corrective and preventative action management
- Management of change processes for the DSMS

- Organisational learning processes
- Emergency management.

The DSMS must provide policies and procedures for the management of changes to the DSMS. Management of change must address changes to procedures, plant equipment and processes and how changes are approved, managed, implemented and how information on change requirements are communicated to all relevant members of the diving workforce and stakeholders.

4. Related Documents

4.1. Legislation

Offshore Petroleum and Greenhouse Gas Storage Act 2006

Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009

Note: All regulatory references contained within this Guidance Note are from the Commonwealth Offshore Petroleum and Greenhouse Gas Storage Act 2006 and the associated Commonwealth Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009. For more information visit the [Federal register of Legislation](https://www.legislation.gov.au/). <https://www.legislation.gov.au/>

4.2. Codes and Standards

AS/NZS ISO 45001:1 – Occupational health and safety management systems – Specification with guidance for use

ISO 45001:2018 - Occupational health and safety management systems – Requirements with guidance for use

4.3. NOPSEMA Documents

N-04000-GL0225 - Making Submissions to NOPSEMA

N-04300-GN0166 – ALARP guidance note

N-04500-FM0711 - DSMS concordance table

N-04500-GL1222 – Diving - General guideline

N-04500-GL1967 – Diving Project Plan Content & Level of Detail guideline

N-04500-PL0054 - Diving Submission Assessment policy

[Register](#) of DSMSs and DPPs

Documents published by NOPSEMA that are relevant to diving operations are available on NOPSEMA's website at <https://www.nopsema.gov.au/offshore-industry/safety/diving-operations/>.

Other documents published by NOPSEMA that diving contractors and operators should consider when preparing and implementing a DSMS and/or DPP are available on NOPSEMA's website at <https://www.nopsema.gov.au/document-hub>.