NOPSEMA
Australia's offshore energy regulator

GUIDANCE NOTE

Safety case lifecycle management

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Core concepts

- **Planning** – The operator should be aware of all stages in the lifecycle of a facility safety case and should plan each of these stages to ensure there is sufficient time and resources set aside for appropriate safety case development. A safety case may address one or more stages in the life of a facility and may relate to more than one facility.
- **Operator registration** – The first stage in the lifecycle of a safety case is to register an operator for a facility or proposed facility. Each new facility (even if replacing an existing facility) must have a registered operator. The regulations require that a safety case can only be submitted by a registered operator.
- **Agreement on scope of validation** – NOPSEMA must agree with the operator on the scope of validation for a proposed facility before a new safety case may be submitted. A nil scope of validation is feasible in certain circumstances. Revised safety cases, depending on the nature of the revision, may require validation, and therefore the agreement of NOPSEMA, on the scope of validation prior to submission of the revised safety case. Scope of validation is addressed under separate guidance.
- **Timing of submission** – New and revised safety cases should be submitted well in advance of the intended activity or change (e.g. construction, installation or operation, modification or decommissioning). The regulations provide for a 90-day assessment period for new safety cases and a 30-day assessment period for revised safety cases. The regulations also allow NOPSEMA to extend these time frames if it is unable to arrive at a decision. Safety case rejection and requests for further written information can lead to delays.
- **Activities limited to accepted safety case** – Once a safety case is accepted, an operator can only undertake the activities provided for in the safety case in force.
- **Revision triggers and management of change** – Certain regulatory triggers exist which prompt a safety case revision while other less significant changes can be undertaken under the operator's Management of Change system without formal submission and acceptance of a revised safety case. Operators are encouraged to develop a strategy and procedures for maintenance of their safety case(s). This could be part of, or be closely linked with, the operator's Management of Change process.
- **Safety case revision triggers** – There are several different triggers for safety case revisions, including: NOPSEMA request, the expiry of five years and changed circumstances. Construction, installation, operation and decommissioning activities may all be covered by revisions to existing safety cases.
- **Withdrawal of acceptance of a safety case** – NOPSEMA may withdraw acceptance of a safety case if an operator has not complied with Schedule 3 to the *Offshore Petroleum and Greenhouse Gas Safety Act 2006* (OPGGS Act), a notice, or any of the safety case revision triggers, or if NOPSEMA has rejected a revised safety case.

- **"Living" document** – The safety case is a "living" document and the safety management system (and associated detailed description in the safety case) should be updated on a continuous basis in line with the principles of continuous improvement.

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Abbreviations/acronyms

FPSO	Floating Production, Storage and Offloading
FSA	Formal Safety Assessment
MAE	Major Accident Event
MoC	Management of Change
MODU	Mobile Offshore Drilling Unit
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
OPGGS Act	*Offshore Petroleum and Greenhouse Gas Storage Act 2006*
OPGGS(S)	Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009
OHS	Occupational Health and Safety
PTW	Permit to Work
SMS	Safety Management System

Key definitions for this guidance note

The following are some useful definitions for terms used in this guidance note. They are a suggested starting point only and are not prescriptively defined.

Decommissioning	*The removal of all structures, equipment and other property in a title area that is neither used, nor to be used, for activities authorised by their associated title.* *Note that for some facilities there may not be a decommissioning stage – e.g. construction or accommodation vessels.*
Significant change	*A significant change is likely to be one that changes the basis on which the safety case was accepted. In relation to a safety management system, "significant change" means a change to the whole of, or a major part of, the safety management system that would warrant a change to the description of the SMS in the safety case.*
Significant cumulative change	*In relation to overall level of risk of major accident events, means a change in the level of risk that is likely to change the basis on which the safety case was accepted.*

Note: The obligation is on the operator to establish what constitutes change in these contexts. If in doubt, operators are welcome to discuss prospective changes with NOPSEMA.

1. Introduction

1.1. Intent and purpose

This document is part of a suite of documents that provide guidance on the preparation of safety cases for offshore facilities, as required under the Commonwealth Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009 [OPGGS(S) Regulations] and the corresponding laws of each State and of the Northern Territory.

Figure 1 illustrates the scope of the NOPSEMA safety case guidance notes overall, and their interrelated nature. The guidance notes are available on the NOPSEMA website, along with guidance on other legislative requirements such as nomination of operators, validation, and notifying and reporting accidents and dangerous occurrences.

Figure 1 – Safety Case Guidance Note Map

This guidance note, in particular, provides guidance on the lifecycle of safety cases under the OPGGS(S) Regulations and the relevant State and Northern Territory equivalents. Regulatory references within this document are generally to the Commonwealth legislation. The guidance will be of use to people who are responsible for preparation, submission and maintenance of safety cases for offshore facilities.

The purpose of the guidance is to explain the objectives of the regulations, to identify the general issues that should be considered and to provide practical examples to illustrate the concepts and potential approaches. It is not the intention of the guidance to provide detailed approaches or detailed regulatory assessment criteria for this subject. The operator should be aware of all stages in the lifecycle of a facility safety case and should plan each of these stages so there is sufficient time and resources set aside to ensure each stage of safety case development is appropriate.

Guidance notes indicate what is explicitly required by the regulations, discuss good practice and suggest possible approaches. An explicit regulatory requirement is indicated by the word **must**, while other cases are indicated by the words **should**, **may**, etc. NOPSEMA acknowledges that what is good practice and what approaches are valid and viable will vary according to the nature of different offshore facilities and their hazards.

If this guidance note does not cover a particular aspect in respect to safety case lifecycle management or if further clarification is required, operators are encouraged to contact NOPSEMA directly.

This guidance note is not a substitute for legal advice on interpretation of the regulations or the Acts under which the regulations have been made.

1.2. Scope

The scope of this guidance note includes all facilities, as defined by Clause 3 and 4 of Schedule 3 to the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGS Act), including facilities that are pipelines.

Figure 2 below provides a graphical representation of the range of steps which form a typical safety case lifecycle.

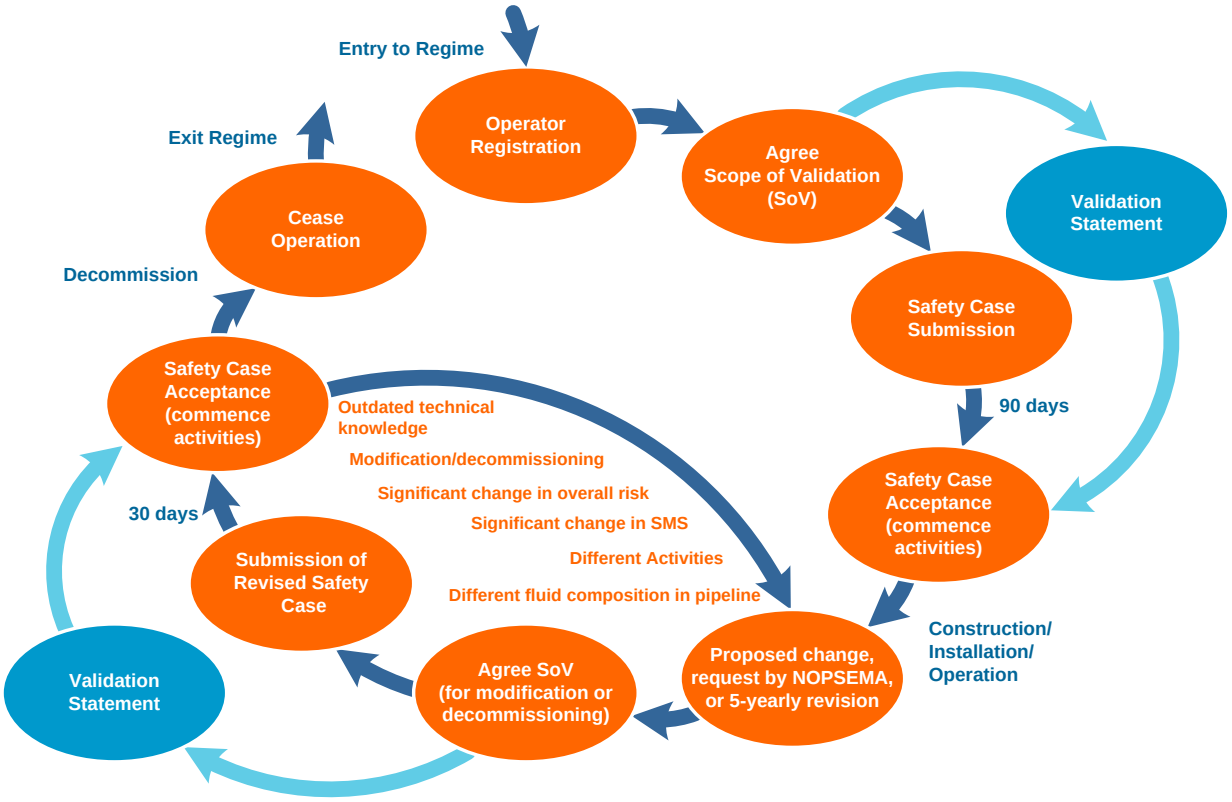

Figure 2 – Safety Case Lifecycle

2. Operator registration

2.1. Operator registration

OPGGS(S) Regulations Part 1 - Operators	
Reg 2.1(1)	A facility owner or a titleholder may give NOPSEMA a written notice nominating a person to be the operator of a facility or a proposed facility.

OPGGS(S) Regulations Part 2 - Safety Cases	
Reg 2.24(1)	If an operator wants to have a safety case accepted for a facility, he or she must submit the safety case to NOPSEMA.

Once it has been determined that a vessel, or structure, is a facility in the context of the definitions provided in clauses 3 and 4 of Schedule 3 of the OPGGS Act, this is the entry point into the safety case lifecycle. The first stage in the lifecycle of a safety case is to ensure the facility or proposed facility has a registered operator. The regulations require that a safety case can only be submitted by a registered operator [OPGGS(S) sub-regulation 2.24(1)] and therefore the facility owner or a titleholder may give NOPSEMA a written notice nominating a person to be the operator for a facility or a proposed facility [OPGGS(S) sub-regulation 2.1(1)]. Note that the legal definition of the term 'person' includes bodies corporate and in most cases the operator of a facility is a body corporate.

NOPSEMA decides on the acceptance or rejection of nominated parties as operators and maintains the register of operators. NOPSEMA must register the nominated operator if it is satisfied that the person has or will have day-to-day management and control of the facility and operations at the facility.

NOPSEMA's preferred form of written notice for nominating a person to be an operator is the Facility Nomination form. This form should be accompanied by a completed worksheet that provides an opportunity for the nominator to analyse the proposed operator arrangement against the NOPSEMA operator registration decision criteria.

This form is available on the NOPSEMA website:

"N-01000-FM0008 Facility Operator Nomination"

This form is available on the NOPSEMA website:

"N-01000-FM0065 Worksheet for Analysis of Operator Status"

2.2. Change or withdrawal of nomination

OPGGS(S) Regulations Part 1 - Operators	
Reg 2.4(2)	An owner, titleholder or operator of a facility may notify NOPSEMA, in writing, that the operator has ceased to be the person who has, or will have, the day-to-day management and control of: (a) the facility or proposed facility; and (b) operations at the facility or proposed facility.

An owner or titleholder, or operator of a facility, may notify NOPSEMA, in writing, that the registered operator has ceased to be the person who has, or will have, day-to-day control of the facility [OPGGS(S) sub-regulation 2.4(2)]. On receipt of this notice NOPSEMA must remove the operator's name from the operator register. At the same time, the facility owner or titleholder, as applicable, should send to NOPSEMA written notice nominating the replacement operator.

3. Safety case

3.1. Agreement of scope of validation

OPGGS(S) Regulations Part 2 - Safety Cases	
Reg 2.24(4)	The operator must not submit the safety case before the operator and NOPSEMA have agreed on the scope of the validation for the facility.
Reg 2.30(3)	If a circumstance mentioned in sub-regulation (1) or (2) is satisfied because the operator proposes to modify or decommission the facility, the operator must not submit the revised safety case before the operator and NOPSEMA have agreed on the scope of the validation of the proposal.

For new safety cases and for revised safety cases where the operator proposes to modify or decommission the facility, the operator must not submit the safety case or revised safety case before the operator and NOPSEMA have agreed on the scope of validation [OPGGS(S) sub-regulation 2.24(4) & 2.30(3)]. Consequently, NOPSEMA will refuse to accept a safety case submission or revised safety case submission from an operator if the parties have not previously agreed on a scope of validation.

Note that the obligation is on the operator to initiate the process of agreement between the parties, not NOPSEMA.

Further guidance is available in the NOPSEMA guideline:

"Validation"

3.2. Involvement of members of the workforce

OPGGS(S) Regulations Part 2 - Safety Cases	
Reg 2.11(1)	The operator of a facility must demonstrate to NOPSEMA, to the reasonable satisfaction of NOPSEMA, that:

	(a) in the development or revision of the safety case for the facility, there has been effective consultation with, and participation of, members of the workforce; and (b) the safety case provides adequately for effective consultation with, and the effective participation of, the members of the workforce, so that they are able to arrive at informed opinions about the risks and hazards to which they may be exposed on the facility.
Reg 2.11(2)	A demonstration for paragraph (1)(a) must be supported by adequate documentation.
Reg 2.11(3)	In subregulation (1): *members of the workforce* **includes members of the workforce who are:** (a) identifiable before the safety case is developed; and (b) working, or likely to be working, on the relevant facility.

The safety case must provide for effective consultation with and effective participation of the members of the workforce, so that they are able to arrive at informed opinions about the risks and hazards to which they may be exposed on the facility [OPGGS(S) sub-regulation 2.11(1)(b)]. This means the safety case should describe the arrangements for consultation with, and participation of, members of the workforce.

In the development of a safety case (or revised safety case), the operator of a facility must demonstrate to NOPSEMA's satisfaction that there has been effective consultation with and participation of members of the workforce [OPGGS(S) sub-regulation 2.11(1)(a)]. This particular demonstration does not necessarily need to be included within the safety case itself. However, it must be supported by adequate documentation [OPGGS(S) sub-regulation 2.11(2)]. As the safety case is the key health and safety document for the facility, it may be the best place to document the demonstration required under OPGGS(S) sub-regulation 2.11(2).

Further guidance is available in the NOPSEMA guideline:

"Involving the workforce"

3.3. Stages in the life of a facility

OPGGS(S) Regulations Part 5 - Penalty Provisions	
Reg 2.44(1)	A person must not: (a) construct or install a facility or part of the facility; or (b) operate a facility or part of the facility; or (c) modify a facility or part of the facility; or (d) carry out maintenance on a facility or part of the facility; or (e) decommission a facility or part of the facility; or (f) do any other work at a facility or part of the facility in Commonwealth waters unless there is a safety case in force for the facility that provides for the activity. Penalty: 80 penalty units.

A safety case is required for a facility prior to commencing activities [OPGGS(S) regulation 2.44]. The activities addressed by this regulation are limited to those activities that take place at the site in

Commonwealth waters. For example, it does not extend to fabrication and construction in a shipyard, etc., even if located in Australia [OPGGS(S) sub-regulation 2.44(1)].

Where design aspects contribute to the control of risks of major accident events, these aspects must be addressed in the safety case for the relevant stage(s) in the life of a facility. These design aspects are also usually addressed through the validation process. Note that the concept of "stages in the life of a facility" does not impose any restrictions and limitations on what activities may be conducted during any particular stage. It is up to the operator to choose what assets and activities are involved in any particular stage, and as long as the accepted safety case adequately addresses those assets and activities, the operator can conduct these activities.

Note that in relation to a facility being constructed in Commonwealth waters, the facility being constructed requires a safety case, and so do some of the vessels and structures assisting with that construction of a facility. Vessels which are facilities include accommodation and construction barges but do not include tugs, anchor handlers or supply vessels. Also, note that the regulation 1.6 of the OPGGS(S) Regulations lists a range of vessels and structures which are not facilities and therefore do not require a safety case (based on the activities they are conducting).

Further guidance is available in the NOPSEMA guideline:

"Facility Definition includes an associated offshore place"

The safety case must be a true reflection of the state of safety arrangements for the existing or proposed facility. It must demonstrate by its contents and any relevant supporting material that the operator knows what technical and human activities occur, or will occur, how they are managed and how safety will be assured in the event of an emergency.

NOPSEMA's Guidance Note N-04300-GN0106 *Safety Case Content and Level of Detail* describes the matters that must be taken into consideration in a safety case for a facility.

A range of vessels and structures may be involved in construction and installation activities. These will vary depending on the type of facility being constructed and/or installed. To assist in providing clarification, a distinction is drawn between two categories of facility involved in construction and installation:

- The facility being constructed – the facility (whether floating or fixed) whose primary purpose is the recovery, processing, storage and offloading of petroleum; the sub-sea trees and associated distribution pipelines, etc. (production facility)
- The facilities performing the construction and installation (construction facilities).

The safety case for construction and installation of a production facility is not intended to be the only safety case that addresses the risks of construction and installation of that production facility. The risks of construction and installation of the production facility are also to be covered by a safety case for each of the construction facilities (e.g. construction vessel, pipelay barge/vessel, accommodation barge/vessel, vessel repairing or modifying a pipeline, etc.) that are used to undertake the construction and installation of the production facility.

Each of the "construction facility" safety cases should focus on the activities performed by that facility, the hazards involved, the controls (both those selected and those rejected) and management system of that operator. The safety case should also include details of any possible interaction between other vessels as the safety case must have consideration for the safety of personnel at or near the facility.

In addition, there may be construction and installation activities that are undertaken on the production facility that are substantially independent of the activities undertaken by the construction facilities. The operator (i.e. person who has, or will have, day-to-day management and control) of the production facility during construction and installation activities needs to ensure they have submitted a safety case that covers the appropriate activities.

Some production facilities such as Floating Production, Storage and Offloading (FPSO) facilities arrive at the site 'constructed' and for these vessels' installation is primarily a connection / disconnection process with the pipeline and sub-sea equipment. However, the "facility" is broader than just the vessel and includes any wells and associated plant, any pipe or system of pipes and any secondary lines associated with the production spread. Typically, these components of the facility are constructed and installed by construction facilities, and as such, all construction activities would be expected to be covered by the various "construction facility" safety cases discussed above.

In the case of an FPSO, the risks associated with the first connection/disconnection should be addressed by a safety case for the production facility covering installation activities. This should also include any other construction and installation work that occurs on the FPSO at a location in Commonwealth or designated coastal waters. This document needs to be submitted and accepted by NOPSEMA prior to the commencement of the installation of the FPSO at location.

3.4. Safety case submission

OPGGS(S) Regulations Part 2 - Safety Cases	
Reg 2.24(1)	If an operator wants to have a safety case accepted for a facility, he or she must submit the safety case to NOPSEMA.
Reg 2.24(4)	The operator must not submit the safety case before the operator and NOPSEMA have agreed on the scope of the validation for the facility.

OPGGS(S) Regulations Part 6 - Miscellaneous	
Reg 2.50(1)	An application or submission (however described) that a person is required or permitted to make or give to NOPSEMA under these Regulations must include: (a) the person's name; and (b) if applicable, the name of the person's agent; and (c) the person's or agent's address in Australia; and (d) the person's or agent's telephone number and facsimile number.
Reg 2.50(2)	If there is a change to any of the details mentioned in sub-regulation (1), the person or agent must notify NOPSEMA in writing as soon as practicable.

For a safety case to be accepted by NOPSEMA, it must first be submitted to NOPSEMA by the operator [OPGGS(S) regulation 2.24]. Once the scope of validation has been agreed between the operator and NOPSEMA, the OPGGS(S) Regulations allow for safety case submission.

New safety cases should be submitted well in advance of the intended activity (e.g. construction, installation or operation) to allow for the assessment process and for further work if additional information is required. New safety cases submitted for acceptance may relate to one or more stages in the life of the

facility (e.g. construction, installation or operation) and may relate to more than one facility. As a minimum, a safety case or revised safety case submission made to NOPSEMA must include a range of details including names, address and contact details as listed above [OPGGS(S) regulation 2.50].

Note that NOPSEMA may delay proceeding with assessment of a safety case until the person, or agent, has provided this information. If there is any change in these details, the person or agent must notify NOPSEMA in writing as soon as possible [OPGGS(S) sub-regulation 2.50(2)]. The operator may choose to make a revised safety case submission accompanied by a completed *Safety Case Submission Cover Sheet*.

This form is available on the NOPSEMA website:

"N-04300-FM0268 Safety Case Submission Cover Sheet"

This form includes fields for the mandatory information mentioned above, as well as details relating to which facility(s), stage(s) in the life of the facility the submission relates, and regulation(s) under which the submission is made.

It is strongly recommended that the operator include with a safety case submission (or revised safety case submission) a "road map" or concordance table clearly indicating which section(s) of the safety case address each requirement of OPGGS(S) regulations 2.5 to 2.23 (i.e. the safety case contents requirements of Division 1, subdivisions A, B, C and D), as these form an integral part of the acceptance criteria under OPGGS(S) regulations 2.26 and 2.34. The operator may choose to make a new or revised safety case submission accompanied by a completed *Safety Case Contents Concordance Table* form.

This form is available on the NOPSEMA website:

"N-04300-FM0629 - Safety Case Contents Concordance Table"

3.5. Assessment and acceptance decision

OPGGS(S) Regulations Part 2 - Safety Cases	
Reg 2.26(1)	NOPSEMA must accept a safety case if: (d) in a case in which NOPSEMA has requested a validation of the facility: (i) the person, or each person, undertaking the validation meets the criteria specified in sub-regulation 2.40(5); and (ii) the validation complies with regulation 2.40.
* Note: Reg 2.34(1)(d) imposes similar requirements in relation to revised safety cases.	
Reg 2.27(1)	Within 90 days after receiving a safety case submitted under regulation 2.24, or resubmitted under sub-regulation 2.26(3), NOPSEMA must: (a) notify the operator, in writing, that NOPSEMA has decided: (i) to accept the safety case; or (ii) to reject the safety case; or (iii) to do both of the following:

(A) accept the safety case for 1 or more specified stages in the life of the facility, but not for every stage in the life of the facility, in respect of which the safety case was submitted;

(B) reject the rest of the safety case; or

(iv) to accept the safety case subject to conditions or limitations; or

(b) notify the operator, in writing, that NOPSEMA is unable to make a decision about the safety case within the period of 90 days and set out a proposed timetable for its consideration of the safety case.

Within 90 days of receiving a new safety case, NOPSEMA must make a decision to either accept or reject the safety case, or must notify the operator that NOPSEMA is unable to make a decision and set out a proposed timetable for its consideration of the safety case [OPGGS(S) sub-regulation 2.27(1)]. During the assessment process, NOPSEMA may seek further written information from the operator about any matter required by the regulations to be included in the safety case.

Each request for further written information must be in writing and must specify a period of at least 30 days within which the information must be provided. NOPSEMA policy is to limit requests for further written information to a maximum of two times for 'new' safety cases and a maximum of once for 'revised' safety cases.

Information received from the operator within the specified period becomes part of the safety case as if it had been included within the safety case as originally submitted to NOPSEMA. Depending upon the nature of the further written information requested and received, NOPSEMA may request the operator to include this further written information in an updated version of the safety case. If the requested written information is not provided to NOPSEMA within the specified period, this will generally lead to NOPSEMA deciding on acceptance or rejection of the safety case based on the information already received. Requests for further written information from the operator can lead to delays in an acceptance decision and can result in the safety case assessment process extending beyond the normal 90-day assessment period for new safety cases.

NOPSEMA must accept the safety case if it is appropriate to the facility, it complies with the requirements of Division 1 of Part 2 of the OPGGS(S) Regulations (Contents of safety cases), and any validation meets the requirements of OPGGS(S) regulation 2.40.

Early engagement between NOPSEMA, the Operator and the Validator is beneficial to ensure that what is delivered to NOPSEMA clearly satisfies the legislative requirements. The timing of this early engagement will be dependent on the complexity of the new facility, modification or decommissioning being contemplated. New or novel approaches, which have not been seen in the Australian offshore petroleum and greenhouse gas storage industry, may require very early engagement.

Further guidance is available in the NOPSEMA guideline:

"Validation"

The operator should allow sufficient time between agreeing on a scope of validation and submission of the safety case. Where validation has been requested, adequate validation forms part of the safety case acceptance criteria [OPGGS(S) sub-regulation 2.26(1)(d) and sub-regulation 2.34(1)(d)] and therefore the validation will need to be completed before the end of the assessment period for NOPSEMA to accept the safety case.

Any acceptance of a safety case may be subject to conditions or limitations. However, it is NOPSEMA policy to avoid applying conditions and limitations except in extraordinary circumstances. Also, NOPSEMA may accept a safety case for one or more stages in the life of the facility and reject the rest of the safety case.

As with the application of conditions or limitations, it is uncommon for NOPSEMA to accept a safety case for a particular stage or stages and reject the rest of the safety case. Unless there is a distinct activity which constitutes a clear stage in the life of a facility, it is often difficult to differentiate between parts of a safety case which relate only to a particular stage in the life of a facility. For example, many safety cases cover several stages in the life of a facility and the systems which control risks can overlap stages.

Also, there may be situations where some construction activities are adequately addressed within a safety case, yet other construction activities are not. In this case, it would be difficult to accept the safety case for the construction stage in the life as the two activities fall within the same stage.

NOPSEMA must give the operator a reasonable opportunity to revise and resubmit a safety case that does not initially meet the regulatory requirements and is rejected. Once a safety case is accepted, an operator can only undertake the activities provided for in the safety case in force.

3.6. When is a submission of a safety case revision required?

OPGGS(S) Regulations Part 2 - Safety Cases	
Reg 2.30(1)	Subject to sub-regulation (3), an operator of a facility for which a safety case is in force must submit a revised safety case to NOPSEMA as soon as practicable after the occurrence of any of the following circumstances: (a) the technical knowledge relied upon to formulate the safety case, including the knowledge of systems for identifying hazards and evaluating risks of major accident events, is outdated so that the safety case no longer adequately provides for the matters mentioned in Subdivisions A, B and C of Division 1; (b) the operator proposes to modify or decommission the facility, and the proposed modification or decommissioning is not adequately addressed in the safety case; (c) there are reasonable grounds for believing that a series of proposed modifications to the facility would result in a significant cumulative change in the overall level of risk of major accident events; (d) the operator proposes to significantly change the safety management system; (e) for a facility that is a pipeline—the compositions of petroleum or greenhouse gas substance conveyed in the pipeline are different from the compositions contemplated in the safety case; (f) the activities to be carried out at the facility are different from the activities contemplated in the safety case.
Reg 2.30(2)	The operator must also submit a revised safety case to NOPSEMA as soon as practicable if there has been: (a) a significant increase in the level of risk to the health or safety of persons at or near the facility; or (b) a series of increases in the level of risk to the health or safety of persons at or near the facility that, in total, are significant.

Reg 2.30(3)	If a circumstance mentioned in sub-regulation (1) or (2) is satisfied because the operator proposes to modify or decommission the facility the operator must not submit the revised safety case before the operator and NOPSEMA have agreed on the scope of the validation of the proposal.
Reg 2.31(1)	NOPSEMA may request the operator of a facility for which a safety case is in force to submit a revised safety case to NOPSEMA.
Reg 2.31(3)	A request by NOPSEMA must be in writing and include the following information: (a) the matters to be addressed by the revision; (b) the date by which the revision is required to be submitted to NOPSEMA; (c) the grounds for the request.
Reg 2.31(4)	The operator may make a submission in writing to NOPSEMA requesting the variation or withdrawal of the request and stating the reasons why: (a) the revision should not occur; or (b) the revision should be in different terms from the terms proposed; or (c) the revision should take effect on a date after the date proposed.
Reg 2.31(5)	The operator must make the submission: (a) within 21 days after receiving the request; or (b) within a longer period specified in writing by NOPSEMA.
Reg 2.31(7)	Unless the request is withdrawn, the operator must comply with a request, or a varied request.
Reg 2.32(1)	The operator of a facility for which a safety case is in force must submit a revised safety case to NOPSEMA: (a) five years after the date that the safety case was first accepted under regulation 2.26; and (b) five years after the date of each acceptance of a revised safety case under regulation 2.34; whether or not a revision under regulation 2.30 or 2.31 has been accepted within the 5-year period.
Reg 2.32(2)	A revised safety case submitted under this regulation must describe the means by which the operator will ensure the ongoing integrity of the technical and other control measures identified by the formal safety assessment for the facility.

OPGGS(S) Regulations Part 5 - Penalty Provisions	
Reg 2.45(1)	A person must not: (a) construct or install a facility or part of the facility; or (b) operate a facility or part of the facility; or (c) modify a facility or part of the facility; or (d) carry out maintenance on a facility or part of the facility; or (e) decommission a facility or part of the facility; or (f) do any other work at a facility, or part of the facility; in Commonwealth waters in a manner that is contrary to: (g) the safety case in force for the facility; or (h) a limitation or condition imposed by sub-regulation 2.26(5) or 2.34(5). Penalty: 80 penalty units.

Operators only need to submit revised safety cases to NOPSEMA for assessment and acceptance when required to do so by the regulations [OPGGS(S) regulations 2.30, 2.31 and 2.32]. These requirements are grouped under three categories: 'change of circumstances or operations', 'request by NOPSEMA' and 'revision after five years'.

3.6.1. Change of circumstances or operations

There are many different types of safety case revisions. Examples include campaign revisions for drilling and well work-over, mobile unit re-entry into Australian waters (and therefore the safety case regime) where different work is proposed, safety cases for construction activities, safety cases for operations, safety cases for decommissioning activities, etc.

In relation to 'change of circumstances or operations', a revised safety case must be submitted as soon as practicable if:

1. the technical knowledge relied upon to formulate the safety case becomes out-dated [OPGGS(S) sub-regulation 2.30(1)(a)];

Example

Where industry experience suggests that assumptions made in the development of a safety case have been less than conservative (e.g. increased vessel/pipe leak frequencies or damage in actual fire situations where it is unexpected or unaccounted for in the safety case), the technical knowledge relied upon to formulate the original safety case may have become outdated and therefore a safety case revision would be required [OPGGS(S) sub-regulation 2.30(1)(a)].

2. the operator proposes to modify or decommission the facility and the proposed modification or decommissioning is not adequately addressed in the safety case [OPGGS(S) subregulation 2.30(1)(b)];

Example

If an operator proposes to modify the process plant to increase production, and the safety case does not include provision for the modification, a safety case revision would be required under OPGGS(S) sub-regulation 2.30(1)(b).

3. a series of proposed modifications would result in a significant cumulative change in the overall risk level of major accident events [OPGGS(S) sub-regulation 2.30(1)(c)];

Example

An example of where a significant cumulative change in the overall level of MAE risk [OPGGS(S) sub-regulation 2.30(1)(c)] may arise when, after some time of keeping a list or register of on-going changes to a 'live' safety case, an operator may recognise that the facility has changed beyond that described in the accepted safety case and decide to revise the safety case accordingly.

4. the operator proposes to significantly change the safety management system that is in force at the facility [OPGGS(S) sub-regulation 2.30(1)(d)]; or

Example

A significant change to the safety management system [OPGGS(S) sub-regulation 2.30(1)(d)] may include, for example, a change to a major component of the SMS, a significant change to the organisational *structure (i.e. where this change may have an impact on safety-critical controls), or a significant change in the operating philosophy of the operator.*

5. for a facility that is a pipeline – the composition of petroleum conveyed in the pipeline are different from the compositions contemplated in the safety case;

Example

If an operator wishes to use a pipeline to convey petroleum or greenhouse gases (or any combination of these) in a composition not previously addressed by the pipeline safety case, a safety case revision will be required under OPGGS(S) sub-regulation 2.30(1)(e).

6. the activities to be carried out at the facility are different from the activities contemplated in the safety case in force [OPGGS(S) sub-regulation 2.30(1)(f).

Example

If an operator wishes to move to the 'operation' stage in the life of the facility but the safety case in force only addresses the 'construction' and 'installation' stages, a safety case revision will be required under OPGGS(S) sub-regulation 2.30(1)(f) to address the proposed activities.

3.6.2. Significant increase in risk

There are also other triggers relating to a significant increase in the level of risk to the health or safety of persons at or near the facility [OPGGS(S) sub-regulation 2.30(2)].

Example

If an operator becomes aware of a new location-specific health hazard such as an infestation or invasion of a disease carrying pest which has the potential to cause significant health effects to people at or near the facility, and which has not been addressed in the safety case in force, a safety case revision will be required under OPGGS(S) sub-regulation 2.30(2) to address control measures for that hazard.

3.6.3. Request by NOPSEMA

NOPSEMA may also request an operator of a facility to submit a revised safety case. This will usually occur if deficiencies are identified in the safety case in force as a result of an inspection, an audit, an incident investigation, etc., or in the event that the safety case in force does not adequately reflect the facility or the activities conducted at the facility.

Any written request by NOPSEMA must specify the matters to be addressed by the revision, the proposed date by which the safety case is to be submitted, and the grounds for the request [OPGGS(S) sub-regulation 2.31(3)].

As part of any safety case revision, an operator should review their operations against NOPSEMA, industry and internal safety alerts, codes and standards (including recent revisions), and associated key learnings as part of continuous improvement. It should also be noted that a request for a revised safety case may also be accompanied by other enforcement measures.

If NOPSEMA requests an operator to submit a revised safety case, the operator can make a written submission to NOPSEMA requesting either a variation or withdrawal of the request, stating the reasons why [OPGGS(S) sub-regulation 2.31(4)]. The operator must usually make the submission within 21 days after receiving the request. However, this period can be extended if specified in writing by NOPSEMA [OPGGS(S) sub-regulation 2.31(5)].

3.6.4. Revision after five years

The operator of a facility must also submit a revised safety case to NOPSEMA five (5) years after the acceptance of the initial safety case [OPGGS(S) regulation 2.32], and then five (5) years after the acceptance of subsequent five (5) yearly safety case revisions. Revised safety cases submitted because of a change of circumstances or operations (OPGGS(S) regulation 2.30), or because NOPSEMA has requested a revision (OPGGS(S) regulation 2.31), which are accepted within the five (5) year period, do not trigger their own five-yearly safety case revision cycle (see Figure 3 on the following page).

It is recommended that operators incorporate the requirement to conduct a five-yearly review and revision of their safety case(s) into their internal processes. These internal processes should ensure that review and revision commence well in advance of the required submission date. Ideally, operators should be continually reviewing and updating their safety cases such that the five-year safety case revision does not have a significant time or resource impact.

A goal of the five-yearly safety case revision is for the operator to demonstrate that the technical and other control measures will continue to reduce risks of major accident events (MAE) to as low as reasonably practicable (ALARP), considering the experience of the operator over the last five years, continuous improvement and developments in good industry practice. A revised safety case submitted after five years must focus on the ongoing integrity of the technical and other control measures identified by the formal safety assessment for major hazards and the management systems that relate to this [OPGGS(S) sub-regulation 2.32(2)]. The assessment of the ongoing integrity will be considered in relation to the 'appropriateness' requirements of OPGGS(S) sub-regulation 2.34(1)(a). As part of this process, the operator should revisit assumptions made in the previous safety case submission(s) and provide evidence of what has been learnt in the previous five years with respect to the validity of the original assumptions.

A safety case revision after five years must describe the means by which the operator will ensure the ongoing integrity of the technical and other measures identified by the formal safety assessment for the facility.

The five-yearly review of a safety case should confirm the following:

- that the safety case, with any necessary updates, is still adequate for the current stage(s) in the life of the facility and is likely to remain so until the next safety case revision
- codes and standards described in the safety case are still current
- consideration has been given to NOPSEMA guidance and industry practice for new facilities, to evaluate any deficiencies, and to identify and implement any reasonably practicable improvements to improve health and safety
- design parameters, ageing processes and equipment, and changes in operating conditions, including process conditions, that may limit the life of the facility have been reviewed
- the availability of ongoing support for control and safety systems, including software
- updated hazard identification. Hazard identification must be a dynamic process, which stays ahead of any changes at the facility that could erode the technical and other control measures or introduce new hazards
- Formal Safety Assessment studies (e.g., FERA, EERA, etc.) have been reviewed and, where necessary, updated to reflect the current and expected future status (over the next five years) of the facility; and

- that the safety management system has undergone continual improvement and remains adequate.

The arrangements for a five-yearly revision of the facility safety case should be a part of the safety management system. The arrangements should ensure that:

- those carrying out the revision are suitably qualified and experienced
- the facility Health and Safety Representatives (HSR) and facility personnel are consulted
- full account is taken of any suggestions, conclusions and recommendations which arise during the revision processes
- any necessary changes to the safety case identified during the revision process be implemented on acceptance of the five-yearly safety case revision by NOPSEMA.

The five-yearly safety case revision may consider any changes to the following topics, particularly in relation to the basic assumptions made in the previously accepted safety case and to its content. The revision should consider the period since the safety case was first accepted, or since the last five-yearly safety case revision was accepted. These are examples and should not limit the scope of the review.

TOPIC	EXAMPLES
Design and operational parameters of the facility and plant, including operational experience and projected operational status and lifetime.	Fatigue and corrosion life of the topsides and structure. Changes to process fluids and phases. Assumptions underpinning risk-based inspection (RBI) programs. Condition of passive fire protection, or cryogenic, coatings.
Maintenance, inspection and testing experience related to instrumented protective functions (Safety Instrumented System).	Data on the performance of the safety instrumented system (e.g. demand on functions and rates of device failure), analysed that data to confirm that the system is functioning as planned, and taken action to rectify deficiencies when necessary.
Modifications to the facility or plant	Changes to the types of fire and gas detectors. The effects of changes on detectable leak sizes.
Changes to and behaviour of, Safety Critical Equipment.	Review of escape, evacuation and rescue arrangements after access/egress routes are modified or decommissioned.
History of incidents and abnormal events	Updating of task and operational risk assessments to include hazards identified from past incidents.
New knowledge and understanding	Awareness of risks highlighted by industry or safety alerts, for example on temporary repairs. Findings from relevant research (engineering and human sciences).
Changes in safety standards or safety methodology/assumptions.	The publication of new or revised codes, review of HAZOPs risk assessments and other techniques used to construct the original arguments for safety.

Changes in management of safety and human factor aspects affecting the facility	Arrangements for assuring competence, adequate manning levels and that adequate attention has been given to human factors.

NOPSEMA will expect a five-yearly safety case revision to address at a minimum the following factors:

- the safety case continues to be appropriate to the facility and its activities
- the revision takes into account all relevant changes and new knowledge since the safety case was last accepted
- the safety case continues to demonstrate the effective identification, management and control of potential MAEs on the facility, and that risks to persons are reduced to a level that is ALARP
- the safety case must describe the review(s), including reviews of key Formal Safety Assessment studies, that have been conducted so that the safety case demonstrates that the facility can continue to be safely operated and that the structure, together with its associated plant, can continue to meet the necessary performance standards to enable compliance with the safety case in force
- consideration not only of new knowledge and current good practice, but of the changes which may have occurred as a result of the ageing of the facility.

3.6.5. Review and Revision Timeline

Figure 3 provides an overview of the review and revision timeline. It also provides a suggested example of when an operator should consider commencing review and revision of their safety case for the purposes of a five-year submission and acceptance. The five (5) yearly revision timeline highlights the initial trigger (five years after acceptance of initial safety case) and subsequent triggers (five years after acceptance of five-yearly safety case revisions) for submission of five yearly revisions.

Figure 3 – Review and Revision Timeline (Example)

3.6.6. Scope of Validation

As per NOPSEMA policy, a validation will be requested in respect of all proposed facilities and all significant changes. Revised safety cases for activities involving modification or decommissioning require agreement on the scope of validation (as mentioned above) prior to submission [OPGGS(S) sub-regulation 2.30(2)].

Depending upon the nature of the modification or decommissioning activity, the agreed scope of validation may be that no validation is required (i.e. a 'nil' validation scope). However, even a 'nil' validation scope requires agreement between the operator and NOPSEMA. Note that in relation to a safety case revision, validation cannot be requested by NOPSEMA for any reason other than the operator proposes to modify or decommission the facility.

3.6.7. Management of Change

The safety case should be sufficiently detailed and comprehensive to cover most eventualities and therefore any deviations would be of a minor nature that can be adequately addressed through the operator's Management of Change system.

A safety case should be a 'live' document which is continuously reviewed and improved. For example, new hazards may be identified during use of procedures described in the safety management system and incorporated in a constantly evolving hazard register. Any new risk control measures identified during any stage in the life of a facility should be incorporated into the facility description, formal safety assessment and safety management system, as appropriate.

NOPSEMA recognises that operators may amend safety cases between formal safety case revisions, as a result of continuous improvement and without the need for formal submission and acceptance. However, it should be noted that the safety case in force is the safety case accepted by NOPSEMA. Therefore, operators should ensure that any amendments made to the safety case do not correspond to changes which meet the criteria for change of circumstances or operations specified in OPGGS(S) regulation 2.30, which would require a formal safety case revision submission.

Operators should also be aware of the penalty provisions under Part 5 of the OPGGS(S) Regulations. In particular, OPGGS(S) regulation 2.45 requires that a person must not conduct activities in a manner which is contrary to the safety case in force, or a limitation or condition imposed on the safety case acceptance. As such, if a proposed activity is not contemplated in an existing safety case, a formal revision is required to be accepted prior to conducting that activity. This does not limit the operator from making minor modifications under the facility's Management of Change process, e.g. replacing a fire water pump with

Example: Fatality during lifting operations

A fatality occurred during lifting operations when a 50-tonne piece of equipment was being lowered into place. The main hoist hydraulic motor of the crane failed catastrophically when the equipment was about a metre above the intended landing position. As a result of the impact, a part of the equipment broke loose and struck a member of the crew supervising the operation, resulting in fatal injuries.

The investigation found that a week before the incident the main hoist hydraulic motor was replaced by an incorrectly sized motor. Though both motors looked very similar and could be installed in the same position, they had very different torque characteristics and were designed for different purposes.

like-for-like or replacing degraded helideck netting. Note the importance of ensuring that the replacement of equipment is a true like-for-like replacement as highlighted in the example below.

The reference to 'modification' in OPGGS(S) sub-regulation 2.30(1)(b) is taken to be modification in the context of the potential impact of the modification on existing or new MAE hazards and/or integrity (e.g. pipeline). Therefore, if the proposed modification has no potential to influence existing or new MAEs or integrity, it is likely that a formal revision of the safety case will not be required.

Example

The conversion of a little used storeroom within the accommodation block for use as a gymnasium would not usually trigger the need for submission of a safety case revision, subject to the operator using their Management of Change (MoC) processes with appropriate risk assessment.

Example

Simple changes to position titles which do not significantly impact on roles may not be considered contrary to the safety case in force in terms of the types of conduct specified, but a major organisational change or changes which have a significant influence on risk control measures would likely require a formal revision under OPGGS(S) sub-regulation 2.30(1)(d).

The operator of a facility should clearly define in the safety case what types of changes can take place under the facility's MoC process and what types of changes require a revised safety case. This should include consideration of the safety case revision triggers set out in OPGGS(S) regulation 2.30.

Changes to a facility or the activities conducted at a facility which do not correspond with any of the safety case revision triggers detailed in OPGGS(S) regulation 2.30 can be undertaken under the operator's Management of Change process without the need for formal submission and acceptance of a revised safety case. Operators should develop a strategy and procedures for maintenance of their safety case including what types of changes can take place under the facility's MoC process and what types of changes require a revised safety case. This could be part of or closely linked with the operator's MoC process. Generally, changes made under the MoC process will be those that have little effect on either the major accident hazards or their associated risk control measures. For example, a like-for-like change of a piece of equipment will generally not result in any overall change in risk, apart from the risk involved with changing out the equipment.

3.7. Revised safety case submission

Revised safety cases (under OPGGS(S) regulation 2.30) should be submitted well in advance of the intended change. The Regulations provide for a 30-day assessment period for revised safety cases and allow NOPSEMA to extend this time frame if it is unable to arrive at a decision. As with safety case submissions, the revised safety case submission must include the details required by OPGGS(S) regulation 2.50.

The operator may choose to make a revised safety case submission accompanied by a completed *Safety Case Submission Cover Sheet.*

This form is available on the NOPSEMA website:

"N-04300-FM0268 Safety Case Submission Cover Sheet"

In addition to the above mandatory submission requirements, this form includes fields for the regulation(s) under which the revised safety case is submitted. For example, if the proposed change relates to a significant change to the operator's safety management system, the form should indicate that the revision is submitted in accordance with sub-regulation 2.30(1)(d).

The form also includes fields for indicating which facility(s) and stage(s) in the life of the facility to which the submission relates.

The long-term impact and short-term risks of such a change would normally be managed under the operator's MoC process. However, the operator needs to keep in mind that a series of proposed modifications to the facility may result in a significant cumulative change in the overall level of risk of major accident events. This may prompt a safety case revision under OPGGS(S) sub-regulation 2.30(1)(c).

3.8. Consent to undertake work outside the requirements of the safety case

OPGGS(S) Regulations Part 2 – Safety Cases	
Reg 2.28(1)	NOPSEMA may, by notice in writing given to the operator of a facility, consent to the conduct of an activity in a manner that is different from the safety case in force in relation to the facility.
Reg 2.28(2)	NOPSEMA must not give a consent under sub-regulation (1) unless it is satisfied that there will not be an occurrence of a significant new risk to health and safety or a significant increase in an existing risk to health and safety arising from the activity in relation to the facility.

It has to be recognised that there may, from time to time, be a requirement to make urgent changes e.g. to prevent or respond to a major accident event. In these cases, the operator will need to seek consent to undertake the activity in a manner that is different from the safety case in force, as provided for under OPGGS(S) regulation 2.28.

Note that it is NOPSEMA policy to only issue such consent in extraordinary circumstances. Consent will not be issued in cases where NOPSEMA believes the operator could have, but has not adequately planned, a proposed change.

Further guidance is available in the NOPSEMA policy:

"Exemptions"

It should also be noted that NOPSEMA is not permitted to give consent unless it is satisfied that there will not be an occurrence of a significant new risk, or a significant increase in an existing risk, from the proposed work. This means the operator needs to be able to demonstrate that they have reviewed the risks associated with the proposed work and it meets the criteria which would allow NOPSEMA to give consent under OPGGS(S) sub-regulation 2.28(2).

If NOPSEMA issues consent to operate outside the requirements of the safety case in force, the operator must ensure the change is fully reviewed and risk assessed. In fact, the change should be reviewed and risk

assessed even if it is only short-term and has already been reversed, as the change may have had potentially undesirable outcomes. Also, it is necessary to identify a better solution to any such 'emergency' that may arise in the future. Operators need to carefully consider the parameters controlling what changes can be allowed and how this can be built into the management of change process e.g. what changes can be made 'on the run' and what changes will require a shutdown.

4. Exit from the regime

OPGGSSA Schedule 3	
Clause 4(7)	In determining when a vessel, or structure, that has the potential to be used for one or more of the purposes referred to in paragraph (1)(b) or (5A)(b) is in fact being so used, the vessel or structure is taken: (a) to commence to be so used only at the time when it arrives at the site where it is to be so used and any activities necessary to make it operational at that site are begun; and *(b)* to cease to be so used when operations cease, and the vessel or structure has been returned either to a navigable form or to a form in which it can be towed to another place.

Under subclause 4(7)(b) of Schedule 3 to the OPGGS Act, a facility ceases to be in the regime when operations cease, and the vessel or structure has been returned either to a navigable form or to a form in which it can be towed to another place.

While mobile facilities generally do not have a decommissioning stage in their life, fixed facilities will generally need to go through this stage. For facilities requiring decommissioning, the operator of the facility may proceed with decommissioning activities only once a safety case, or safety case revision, addressing the decommissioning stage in the life of a facility has been accepted by NOPSEMA. However, as with construction and installation activities, decommissioning will usually include involvement of one or more other facilities which will also need to have a safety case in force prior to commencement of decommissioning activities.

Mobile facilities with a safety case in force may move in and out of the regime provided that the activities and hazards addressed by the existing safety case do not change. If there are changes which impact on the facility or its operations (including emergency arrangements) a safety case revision submission may be required.

Example

If a mobile facility is to conduct similar operations to those already addressed in the safety case in force for the facility but those operations are to be conducted further from the Australian coast, such that the emergency response arrangements need to be changed, this may require submission of a safety case revision under OPGGS(S) sub-regulation 2.30(1)(d).

The obligation is on the operator to monitor changes which may require a safety case revision under OPGGS(S) regulation 2.30.

5. Withdrawal of acceptance

OPGGS(S) Regulations Part 2 – Safety Cases	
Reg 2.37(1)	NOPSEMA may, by written notice to the operator of a facility, withdraw the acceptance of the safety case for the facility on any of the following grounds: (a) the operator has not complied with: (i) Schedule 3 to the Act; or (ii) a notice issued by an OHS inspector under Schedule 3 to the Act; or (iii) regulation 2.30, 2.31 or 2.32; or (b) NOPSEMA has rejected a revised safety case under regulation 2.34.

NOPSEMA may withdraw acceptance of a safety case if an operator has not complied with Schedule 3 to the OPGGS Act, a notice, any of the safety case revision triggers, or if NOPSEMA has rejected a revised safety case [OPGGS(S) sub-regulation 2.37(1)]. Before withdrawing the acceptance of a safety case for a facility, NOPSEMA must give the operator at least 30 days' notice, in writing, of its intention to withdraw the acceptance, and must give the operator the opportunity to make a written submission in relation to the matters NOPSEMA should take into account when deciding whether to withdraw acceptance.

On withdrawal of acceptance of a safety case, the operator would immediately have to make the facility safe and then cease activities, as there is no longer a safety case in force. This is generally a sanction that would be used only in extreme circumstances where other compliance and enforcement provisions have proved ineffective. If acceptance of a safety case is withdrawn, the operator may submit a 'new' safety case for acceptance in accordance with OPGGS(S) regulation 2.24. Note that any such submission is not a submission of a revised safety case as a revised safety case can only be submitted when there is a safety case in force.

6. Critical factors for success

- The scope of validation has been agreed with NOPSEMA before submitting a safety case or revised safety case and the validation is deliverable as part of the safety case assessment process.
- Members of the workforce have been consulted and participated in the development of a new safety case and every subsequent safety case revision.
- Any new safety case is submitted at least 90 days prior to the proposed commencement of facility activities.
- Any revised safety case is submitted at least 30 days prior to the proposed commencement of changed activities on a facility.
- Five-yearly safety case revisions are submitted by the due date, which would be the fifth anniversary of the acceptance of a new safety case (or a previously accepted five-yearly revision).
- The safety case fully complies with the requirements of OPGGS(S) regulations 2.5 to 2.23 prior to submission. [Note: inclusion of a 'road map' indicating which section(s) of the safety case address each of these safety case contents requirements would be helpful in establishing all the relevant regulations have been addressed.]

7. References and acknowledgements

7.1. Legislative references

- *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 facilities located in designated coastal waters, please refer to the relevant State or Northern Territory legislation.

7.2. Publications

Australian Government Department of Industry, Science, Energy and Resources - Offshore Petroleum Decommissioning Guideline

7.3. NOPSEMA Documents

- N-01000-FM0008 - Facility Operator Nomination
- N-01000-FM0065 - Worksheet for Analysis of Operator Status
- N-01000-GN0007 - Criteria for Registration and Deregistration
- N-01000-GL0253 - Facility Definition includes an associated offshore place
- N-04000-PL0050 - Assessment
- N-04200-GL0063 - Validation
- N-04300-GN0106 - Safety Case Content and Level of Detail
- N-04300-GN1054 - Involving the Workforce
- N-04300-FM0268 - Safety Case Submission Cover Sheet
- N-04300-FM0629 - Safety Case Contents Concordance Table
- N-04300-PL0052 – Safety Case Assessment
- N-05000-PL0157 - Exemptions