



Department of **Energy, Mines,
Industry Regulation and Safety**



GUIDE

Validation requirements

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Reference

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Acknowledgement

This publication was produced by WorkSafe Western Australia using information contained within the National Offshore Petroleum Safety and Environmental Management Authority's (NOPSEMA's) suite of guidance notes on validation.

Foreword

Western Australia's work health and safety (WHS) legislation came into force in March, 2022. This resulted in the amendment of the various petroleum Acts and the repeal of the associated regulations so that all onshore and offshore petroleum, pipeline and geothermal energy operations are now subject to the requirements of the:

- *Work Health and Safety Act 2020* (the WHS Act)
- Work Health and Safety (Petroleum and Geothermal Energy Operations) Regulations 2022 (WHS PAGEO Regulations).

A key responsibility for the WorkSafe Group (WorkSafe) of the Department of Energy, Mines, Industry Regulation and Safety continues to be the ongoing risk management and safety requirements for the onshore and offshore petroleum, pipeline and geothermal energy operations. To support these requirements the guides previously developed have been updated to provide support and assist operators to meet their commitments under the WHS Act and WHS PAGEO Regulations.

Application

This Guide is a non-statutory document provided by WorkSafe to assist persons subject to duties under the WHS Act and requirements to conduct audits of the safety management system as prescribed by the WHS PAGEO Regulations.

It has been developed to provide advice and guidance to operators to meet the WHS Act and the WHS PAGEO Regulations requirements administered by WorkSafe.

Who should use this Guide?

You should use this Guide if you are the operator of onshore or offshore petroleum, pipeline or geothermal energy operations under the WHS Act.

WHS legislation

Under the WHS Act, the WorkSafe Commissioner is responsible for performing the functions and exercising the powers of the regulator. Each safety document must be submitted for acceptance by the regulator.

WorkSafe assists the regulator in the administration of the WHS Act and the WHS PAGEO Regulations, including the provision of inspectors and other staff to oversee compliance with the legislation.

For facilities outside the Western Australian waters, the WHS Act does not apply and guidance should be sought from National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA). If a vessel does not fall under the definition of “facility” in the Act, operators should contact the Australian Maritime Safety Authority and Department of Transport.

No petroleum or geothermal operations can be conducted on any onshore or offshore petroleum, pipeline or geothermal energy operations unless the facility has an operator registered in accordance with the requirements of WHS PAGEO Regulations.

The WHS PAGEO Regulations provided for transitional provisions in relation to facility operators and safety cases in place or submitted before the commencement of the WHS legislation.

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1 Introduction

This Guide provides operators with assistance to meet their obligations for validation of proposed operations and proposed significant changes to operations as set out in the Work Health and Safety (Petroleum and Geothermal Energy Operations) Regulations 2022 (WHS PAGEO Regulations).

The objective is to provide clarity on areas of the legislation that may be ambiguous or open to interpretation.

2 What is validation?

WHS PAGEO Regulations r. 51

Safety case to be submitted to regulator

WHS PAGEO Regulations r. 58

Revision because of change of circumstances or operations

WHS PAGEO Regulations r. 67

Validation of proposed operations and proposed significant changes to operations

The regulator may request, in writing, an operator to provide a validation of a proposed operation or a proposed significant change to an operation. The operator and the regulator must have agreed on the scope of any validation required before a safety case or revised safety case can be submitted.

Validation of a **proposed operation** is a statement in writing by an independent person that establishes, to the level of assurance reasonably required by the regulator, that the design, construction and installation (including instrumentation, process layout and process control systems) of the facility associated with the proposed operation incorporate measures that will protect the health and safety of persons at, or in the vicinity of, the facility and are consistent with the formal safety assessment for the proposed operation, to the extent that these matters are covered by the scope of the validation agreed between the regulator and the operator.

Validation of a **proposed significant change to an operation** is a statement in writing by an independent person in respect of the proposed change, that establishes, to the level of assurance reasonably required by the regulator that, after any proposed significant change to the operation, a facility associated with the operation will incorporate measures that will protect the health and safety of persons at or in the vicinity of the facility, to the extent required by the scope of the validation agreed between the regulator and the operator. A significant change to an operation includes decommissioning.

2.1 Verification

Validation should not be confused with verification which is a process that generally requires someone to check that, for example, safety critical equipment has been installed correctly and is fit for its function and use. This cannot be performed until such time as the installation of the equipment has been completed which cannot take place until the relevant safety case for the operation has been accepted.

Verification therefore, is a separate process from validation and generally should be addressed within the safety case for the operation rather than included with validation.

3 Validation process

WHS PAGEO Regulations r. 67(2)

Validation of proposed operations and proposed significant changes to operations

The regulator may, by notice in writing, require an operator to provide a validation in respect of:

- a proposed operation, or
- a proposed significant change to an operation.

Upon receipt of the notice from the regulator, the operator needs to:

- identify a suitably qualified, independent third party to undertake the role of validator
- draft a scope of validation to be agreed with the regulator
- gather appropriate documentation and data relating to the proposed operation or significant change to an operation to make available to the validator.

3.1 Appointment of validator

WHS Act s. 26A

Duty of persons conducting business or undertakings that provide services relating to work health and safety

When seeking to appoint a validator the operator must satisfy themselves and the regulator that the proposed validator is sufficiently independent to form an impartial opinion on the proposed operation which is the subject of the validation.

A proposed validator who is working for an operator or an organisation involved in the design, fabrication or installation of the validated equipment, even if the validator is working in a unit separate to the design, fabrication or installation division, department or branch, is not considered to be sufficiently independent.

The appointed validator, whether an individual or part of an organisation, must also be aware of their responsibilities under the WHS Act regarding the duties of persons conducting businesses or undertakings that provide services relating to work health and safety.

No instructions should be issued to the proposed validator prior to agreement of the scope of validation with the regulator.

For further information, see the [*Interpretive guideline: Duty of persons conducting business or undertakings that provide services relating to work health and safety*](#).

3.1.1 The validator

WHS PAGEO Regulations r. 67(6)

Validation of proposed operations and proposed significant changes to operations

The operator should submit information on the validator as well as the actual validation. This information is often best contained within the scope of validation which will then enable the regulator to be assured of the proposed validator's independence, competency and ability to confirm that the validator is acceptable to the regulator before the validation process begins.

The operator must satisfy the regulator that each person who undertakes a validation is competent and able to do so. The operator can demonstrate this by:

- describing the process for the operator's selection of the validator
- describing the operator's competency criteria for validators
- assessing the competency of the validator against the above requirements

3.1.2 Independence of the validator

A validator must be sufficiently independent from the items included in the scope of validation to be able to form an impartial opinion. This independence may be demonstrated by the operator by providing:

- evidence of the validator being, or being employed by (in the case of an individual), an independent organisation which was not involved in the design, manufacture, construction or installation of the equipment being validated
- evidence of the validator being, or being employed by (in the case of an individual) an organisation separate to the operator (e.g. a copy of the validation contract between the validator or validator's organisation and the operator)
- if the validator is directly employed by an organisation providing validation and design (or fabrication or installation) services
 - documentary evidence that the company has not been involved in the design, fabrication or installation of the validated equipment
 - a written statement from the validator confirming their independence (e.g. that they were not involved in the design, fabrication or testing of the validated equipment and that they are not under pecuniary or any other pressure to produce a positive validation).

3.2 Scope of validation

Before issuing instructions to the proposed validator, the operator must draft a scope of validation which is to be agreed with the regulator.

The scope of validation needs to be appropriate for the activities that will take place for the proposed operation or significant change to an operation and should include details of the proposed validator. The scope of validation should contain evidence of the selection criteria for the validator, their competence and experience in all aspects that are to be validated and their independence.

It is expected that the operator will liaise with the regulator in a timely manner enabling the scope of validation to be agreed, the validation conducted and a report completed and submitted to the regulator to allow acceptance of the safety case. Agreement on the scope of validation may require multiple meetings and discussions to resolve any differences in expectations, especially in the case of more complex operations.

If the operator and regulator cannot reach agreement on the scope of the validation then the operator is unable to complete the validation. The safety case or safety case revision can be submitted to the regulator but will not be accepted until such time as the completed validation has been received and accepted.

3.2.1 Scope of validation – contents

The scope of validation should not just be simply a list of identified safety critical elements of the operation to be validated, but should contain additional information for the benefit of the regulator and also the proposed validator. Examples are shown below.

- An overview of the proposed new operation or significant change to an existing operation (decommissioning is classed as a significant change to an operation) should be a high level overview with consideration given to the inclusion of a drawing of the layout to aid the regulator and the proposed validator.
- A description of the process used for the identification of the items for validation should be included in the scope.
- Details of the relevant codes and standards should be identified for each safety critical element. The link between the selected item and the code or standard to be applied should be clearly stated in the scope of validation and each code and standard should be correctly identified by title, reference number and application of the version or revision. The operator should include instructions in the scope of validation to the validator to confirm, as part of the validation process, that the codes and standards selected are appropriate for the safety critical systems being validated.
- Relevant safety studies, analysis reports and safety documents that are available should be referenced in the scope of validation and linked to the safety critical elements identified.
- The scope of validation should include a clearly defined deliverable. See section 3.5.

Note the validation relates to the facility (i.e. hardware, including process control hardware or its software equivalent) and not the activities undertaken at the facility or the procedures that manage those activities.

3.2.2 Changes to scope of validation

Once agreed, it is not expected that there will be any subsequent changes to the scope of validation.

Provided the selection of elements subject to validation is based on sound principles then, on submission of the safety case there should be no major misalignment between the elements of the scope of validation agreed and the submitted safety case.

There may be circumstances where, after agreement for the scope of validation has been reached, the design of the proposed operation or significant change to an operation is altered or was not adequately described by the operator initially. The regulator therefore may request change using one of the following options

- request an additional validation under the WHS PAGEO Regulations
- request further written information as part of the safety case assessment process, or
- reject the safety case for the operation for those activities associated with the particular safety critical element which was omitted from the validation.

The approach taken by the regulator will be dependent on the significance of the omitted scope item.

3.3 Offshore facilities – validation requirements

Operators with validation requirements for offshore facilities operating in Commonwealth waters under the Offshore Petroleum and Greenhouse Gas Storage Act 2006, which also operate in the Western Australian State waters under WHS PAGEO Regulations should refer to the [NOPSEMA Validation Guideline](#) for information relating to:

- lifecycle stages
- marine classification certificates
- validation and saturation diving systems
- validation of well testing equipment.

3.4 Timing of the validation

For a proposed new operation or a significant change to an existing operation, the timing of the validation in relation to the other requirements is important to enable the proposed project to be completed as smoothly as possible without undue delays in complying with regulatory requirements. Listed below are steps to be taken as a guide to how validation fits into process.

1. Operator nomination and registration (where appropriate).
2. The regulator forwards a request for validation in writing.
3. The regulator and operator reach agreement on the scope of validation including:
 - what safety critical elements of the operation are required to be validated
 - the timescale for when the validation of these elements is required in order to progress the safety case decision-making process
 - the nature and credit assigned, regarding validation, of any relevant marine certification, where appropriate (see section 3.3 for further information)
 - the form of the validation deliverable (e.g. statement, report or certificate).
4. The regulator and the operator agree to the competence and independence of the validator selected to address the validation requirements of the WHS PAGEO Regulations.
5. The regulator and the operator agree the scope of validation and the regulator sends written notification of the agreement to the operator.
6. The operator submits the safety case for the operation or a revised safety case for a significant change in existing operations.
7. Safety case assessment and validation process is underway.
8. Validation delivered.
9. Safety case decision made.

The requirement for validation impacts the timing of the submission of the validation and safety case documentation by the operator. Depending on the nature of the operation, the validation may be split into more than one report with the submission of the initial validation covering the design and construction of an operation aligned to the construction safety case and a second report for the installation validation to be completed and submitted before the safety case for the day-to-day operation can be accepted.

If it is anticipated that more than one validation is required for a proposed operation or significant change to an existing operation, this information should be included in the scope of validation to be agreed by the regulator and the operator.

Note that it is a requirement that the actual validation (not the scope of validation) is provided to the regulator before the safety case is accepted. Therefore the scope of validation cannot contain any activities that must be completed during commissioning.

3.5 Validation deliverables

The operator and the regulator should be clear about the validation deliverables when the scope of validation is agreed.

When making their report the validator should confirm that they have had sufficient access to the necessary information to allow them to make their decision.

This should then enable the validator to submit a validation statement for a proposed operation, or for a significant change to an existing operation, with a clearly defined scope of validation to the effect that:

- for all safety critical elements covered by the agreed scope of validation, the design, construction and installation codes and standards applied in relation to the operation are appropriate
- if these codes and standards are used, then the design, construction and installation of the operation will include measures that will protect the health and safety of persons at the operation and are consistent with the formal safety assessment of the operation, where appropriate
- for any safety critical elements in the agreed scope of validation where there are no applicable codes and standards identified, the relevant safety studies, analysis reports and safety documents applied in relation to an operation are appropriate and, if these are used, then the design, construction and installation of the operation will include measures that will protect the health and safety of persons at the operation and are consistent with the formal safety assessment of the operation, where appropriate.

For more complex facilities, a two tier validation approach may be used where the validation report contains:

- a section with the specific items and areas being validated, and certification/validation reports issued by discipline validators (e.g. pressure equipment validators)
- another section with the appointed validator's report providing an overall validation with respect to the agreed scope of validation (based on the certification and validation reports issued by the discipline validators).

Discussions with the operator and the regulator may result in agreement that only the appointed validator's report needs to be submitted for review, subject to the discipline validator report(s) being available for review if requested.

4 Validation success factors

The success of the validation process depends on agreement between the regulator and the operator to a scope of validation that is both effective and deliverable. Early meetings with the regulator, the operator and, if appropriate, the validator, will ensure that what is delivered to the regulator clearly satisfies the regulatory requirements and meets the agreed scope of validation.

The validation must be aligned with the scope of the safety case that is going to be submitted to the regulator for assessment and acceptance.

There should be a clear view of what treatment is required for each element so that an unconditional validation report can be provided in a reasonable timeframe, and assurance about other matters that require verification are adequately covered in the safety case.

Appendix 1 Glossary

The following terms are defined for the purposes of this Guide.

Key terms	Meaning
Competent person	A person who has acquired through training, qualification or experience the knowledge and skills to carry out the task. The definition of 'competent person' in the Work Health and Safety (General) Regulations prescribes specific requirements for some types of work such as diving.
Facility	<p>Geothermal energy facility – a place at which geothermal energy operations are carried out and includes any fixture, fitting, plant or structure at the place</p> <p>Petroleum facility – a place at which petroleum operations are carried out and includes any fixture, fitting, plant or structure at the place</p> <p>Mobile facility – includes an onshore drilling rig</p> <p>The term facility has been adopted throughout this document to cover offshore and onshore facilities and pipelines including aboveground structures associated with onshore pipelines.</p>
Geothermal energy operation	<p>Means an operation to:</p> <ul style="list-style-type: none"> • explore for geothermal energy resources • drill for geothermal energy resources • recover geothermal energy • or is any other kind of operation that is prescribed by the regulations to be a geothermal energy operation for the purpose of this definition <p>and carry on of such operations and the execution of such works as are necessary for that purpose.</p>
Inspector	WorkSafe Petroleum Safety inspector
Major accident event (MAE)	An event connected with a facility, including a natural event, having the potential to cause multiple fatalities of persons at or near the facility.
Operator	A person who has, or will have, the day-to-day management and control of operations at a facility and is registered as the operator of the facility under WHS (PAGEO) Regulations r.22(3).
Person conducting a business or undertaking (PCBU)	A PCBU is an umbrella concept capturing all types of working arrangements or relationships. A PCBU includes a company, unincorporated body or association and sole trader or self-employed person. Individuals who are in a partnership that is conducting a business will individually and collectively be a PCBU. A reference to a PCBU includes reference to the operator of a facility.

Key terms	Meaning
Petroleum operation	Means an activity that is carried out in an area in respect of which a petroleum title is in force, or that is carried out in an adjacent area, for the purpose of any of the following: <ul style="list-style-type: none"> • exploring for petroleum • drilling or servicing a well for petroleum • extracting or recovering petroleum • injecting petroleum into a natural underground reservoir • processing petroleum • handling or storing petroleum • the piped conveyance or offloading of petroleum.
Regulator	The WorkSafe Commissioner is the regulator under the <i>Work Health and Safety Act 2020</i> .
Safety case	Documented provisions related to the health and safety of people at or in the vicinity of a facility, including identification of hazards and assessment of risks; control measures to eliminate or manage hazards and risks; monitoring, audit review and continual improvement
Safety critical element (SCE)	Any item of equipment, system, process, procedure or other control measure the failure of which can contribute to an MAE
Validation	A statement in writing by an independent person in respect of the design, construction and installation of a facility that complies with r. 67
Validator	An independent third party able to form an impartial opinion
WHS Act	<i>Work Health and Safety Act 2020</i>
WHS PAGEO Regulations	Work Health and Safety (Petroleum and Geothermal Energy Operations) Regulations 2022
Worker	Any person who carries out work for a person conducting a business or undertaking, including work as an employee, contractor or subcontractor (or their employee), self-employed person, outworker, apprentice or trainee, work experience student, employee of a labour hire company placed with a 'host employer' or a volunteer

Appendix 2 Further information

Petroleum safety guidance

Interpretive guidelines

- *Development and submission of a diving safety management system*
- *Development and submission of a safety case*
- *Development and submission of an onshore facility safety case – drilling operations*

Guides

- *Audits, review and continual improvement*
- *Bridging documents and simultaneous operations (SIMOPS)*
- *Dangerous goods and hazardous chemicals in petroleum, pipeline and geothermal energy operations*
- *Decommissioning and management of ageing assets*
- *Demonstration of risk reduction so far as is reasonably practicable (SFAIRP)*
- *Diving start-up notices*
- *Emergency response planning*
- *Facility design case*
- *Hazard identification*
- *Health and safety leading and lagging performance indicators*
- *Human factors fundamentals for petroleum and major hazard facility operators*
- *Human factors self-assessment guide and tool for safety management systems at petroleum and major hazard facility operations*
- *Identification of major accident events, control measures and performance standards*
- *Inspections – Land-based drilling rigs*
- *Involvement of workers*
- *Management of change*
- *Nomination of an operator*
- *Records management including document control*
- *Risk assessment and management including operational risk assessment*
- *Validation requirements*

Codes of practice

- [*Mentally healthy workplaces for fly-in fly-out workers in the construction and resources sector*](#)
- [*Psychosocial hazards in the workplace*](#)
- [*Workplace behaviour*](#)

See the WorkSafe website for [approved codes of practice](#) on a range of related topics such as Managing the risks of hazardous chemicals in the workplace, Confined spaces, Managing the risk of falls at workplaces, Managing risk of plant and Managing the work environment and facilities.

Other resources

- [*Discriminatory, coercive and misleading conduct – Interpretive guideline*](#)
- [*How to determine what is reasonably practicable to meet a health and safety duty: Interpretive guideline*](#)
- [*Incident notification: Interpretive guideline*](#)
- [*The health and safety duty of an officer: Interpretive guideline*](#)
- [*The meaning of ‘person conducting a business or undertaking’ \(PCBU\): Interpretive guideline*](#)



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