Government of **Western Australia**
Department of **Mines, Industry Regulation and Safety**
Resource and Environmental Regulation

GUIDELINES

Decommissioning of petroleum and geothermal energy property, equipment and infrastructure in Western Australian onshore areas and State coastal waters

For activities regulated under the *Petroleum and Geothermal Energy Resources Act 1967*, *Petroleum Pipelines Act 1969* and *Petroleum (Submerged Lands) Act 1982*

Document Hierarchy

Legislation	*Petroleum and Geothermal Energy Resources Act 1967* *Petroleum Pipelines Act 1969* *Petroleum (Submerged Lands) Act 1982* Petroleum and Geothermal Energy Resources (Resource Management and Administration) Regulations 2015 Petroleum (Submerged Lands) (Resource Management and Administration) Regulations 2015 Petroleum and Geothermal Energy Resources (Environment) Regulation 2012 Petroleum Pipelines (Environment) Regulations 2012 Petroleum (Submerged Lands) (Environment) Regulations 2012
Policy	Draft Policy - Decommissioning of petroleum and geothermal energy property, equipment and infrastructure in Western Australian onshore areas and State coastal waters
Guidelines	**This Document** Guideline for the Development of Petroleum, Geothermal and Pipeline Environment Plans in Western Australia Guideline on how to prepare a Field Management Plan Guidelines to Petroleum and Geothermal Energy Resources (Resource Management and Administration) Regulations 2015 and Petroleum (Submerged Lands) (Resource Management and Administration) Regulations 2015
Procedures	

Version History

Version	Date	Changes
0.1	2023	Draft for consultation

Purpose

This document provides guidance to operators and registered holders in Western Australia (WA) in how to address the Department of Mines, Industry Regulation and Safety's (DMIRS) expectations for the decommissioning and rehabilitation obligations with respect to their operations, and any equipment, infrastructure, facilities, wells and pipelines. This document should be read in conjunction with the Draft Policy - Decommissioning of petroleum and geothermal energy property, equipment and infrastructure in Western Australian onshore areas and State coastal waters.

Objective

The objective of this guideline is to provide guidance for operators and registered holders on appropriately planning for and executing the decommissioning of petroleum, geothermal energy or pipeline property and associated disturbance areas, and the rehabilitation of affected lands and waters in WA.

Scope

The scope of this guideline extends to matters covered by the:

- *Petroleum and Geothermal Energy Resources Act 1967* (PGERA), which applies to all onshore areas in WA, including its islands and, in certain circumstances, areas of submerged lands internal to the State (i.e. those waters landward of the baseline);
- *Petroleum Pipelines Act 1969* (PPA), which applies to the construction, operation and maintenance of pipelines for the conveyance of petroleum on land within the State; and
- *Petroleum (Submerged Lands) Act 1982* (PSLA), which applies to petroleum resources located within WA's territorial sea (including the territorial sea around State islands) and includes related pipelines;

(together, the Petroleum Acts) for onshore and offshore petroleum, geothermal energy and pipeline activities in WA.

This guideline does not capture safety-related matters established in the *Work Health and Safety Act 2020* or the Work Health and Safety (Petroleum and Geothermal Energy Operations) Regulations 2022. Notwithstanding, it is important to note that operators are required to have a Safety Case (SC) in force at all times until decommissioning and rehabilitation activities are completed and the facility, equipment and / or infrastructure no longer exists. The operator is responsible for ensuring that decommissioning, rehabilitation and monitoring activities are addressed in an approved SC.

This guideline does not capture decommissioning and rehabilitation requirements established in legislation that is not administered by DMIRS such as the *Environmental Protection Act 1986* and associated regulations or the *Environment Protection (Sea Dumping) Act 1981* (Cth) and Environment Protection (Sea Dumping) Regulations 1983 (Cth). Notwithstanding, statutory requirements established in other legislation beyond the Petroleum Acts, may interface with the requirements set out in the Petroleum Acts, the Environmental Regulations and the RMA Regulations, and DMIRS encourages operators and registered holders to be familiar with their obligations and to liaise with each relevant regulatory authority in the course of planning for and undertaking decommissioning.

Expectations for Consideration of Decommissioning in Applications Submitted to DMIRS

DMIRS' decommissioning expectations are detailed in the Draft Policy - Decommissioning of petroleum and geothermal energy property, equipment and infrastructure in Western Australian onshore areas and State coastal waters.

DMIRS expects that equipment, facilities and infrastructure related to resource industry activities are to be decommissioned and rehabilitated in an ecologically sustainable manner, consistent with agreed environmental outcomes and end land uses without unacceptable liability to the State. Early consideration and progressive attention to decommissioning, rehabilitation and closure activities is critical to ensuring DMIRS' decommissioning expectation objective is achieved. Planning for decommissioning should be incorporated into all stages of the life of a petroleum, geothermal energy and pipeline project and progressive decommissioning and rehabilitation should be undertaken as early as possible in the operational life of a project.

Environment Plans

The Environment Plan (EP) is revised on a five yearly basis giving the operator time to provide refined detail about closure planning over time. It is DMIRS' expectation that as activities progress, each EP revision should contain greater decommissioning and rehabilitation planning information.

The Environment Regulations establish that operators must demonstrate the proposed activity meets the acceptance criteria in regulation 11 in order to enable the approval of an EP. In order to comply with regulation 11, DMIRS expects:

- *Inventory of all Property, Equipment and Infrastructure:*

  An inventory of all property, equipment and infrastructure on the title area including a description, design life, age, operational status and future intended use and be accompanied with spatial data and / or figures.

- *Maintenance of Infrastructure:*

  Information and provisions for the maintenance of property, equipment and infrastructure in such a way that allows for full removal and future use.

- *Description of Progressive Decommissioning:*

  A description of progressive decommissioning when property, equipment and infrastructure is not in use. DMIRS expects the EP to show progress towards proactive and progressive decommissioning. DMIRS expects property, equipment or infrastructure that is no longer in use to be appropriately maintained and progressively decommissioned over time.

- *Description of Full Decommissioning:*

  A description of how and when full decommissioning is expected. The older the asset, the more decommissioning detail will be expected in subsequent EP revisions. The EP should discuss trends in offtake / production rates and when cessation of production is anticipated.

- *Commitment to Full Removal:*

  DMIRS' principal closure objectives are for rehabilitated sites to be (physically) safe to humans and animals, stable, non-polluting / non-contaminating and capable of sustaining an agreed post-activity land use. This closure objective carries through to decommissioning as a relevant objective and expectation.

  DMIRS expects to see a commitment towards full removal of all property, equipment and infrastructure as a base case. DMIRS recognises there may be instances whereby it may not be appropriate to remove all property, equipment and infrastructure as doing so may not be feasible or may result in greater harm to the surrounding environment. Deviations from full removal may be considered by the Minister on a case-by-case basis. The responsibility lies with the operator and / or registered holder to make a sufficiently compelling case for any deviation case(s). The operator and / or registered holder will need to demonstrate that the deviation will have equal or better outcomes for the environment, when accounting for the measures / actions that the operator and / or registered holder will take to prevent, avoid, minimize, reduce and / or offset the environmental risks and environmental impacts associated with not fully removing the property, equipment and infrastructure.

  DMIRS will consider possible alternatives to full removal, including comparative risk assessments and all available information in determining whether property, infrastructure or equipment is able to be left in situ. The approach to comparative risk assessments should reflect a triple-bottom-line approach, incorporating the economic, social and environmental dimensions of decision-making, consistent with the principles of ecologically sustainable development.

- *Risk Assessment:*

  If operators submit a comparative risk assessment to leave property, equipment or infrastructure in place, DMIRS expects to see a full description of the risk assessment including all factors, weighting, risks, benefits, environmental impacts, technical risk, effect on other users and full social and economic considerations. This should then be followed by a demonstration of how the proposal meets the ALARP principle (as low as reasonably practicable). Comparative risk assessments should be supported by contemporary best practice, informed by scientific data and be specific to relevant infrastructure and the surrounding environment.

- *Stakeholder Engagement:*

  A detailed and bespoke consultation and engagement program that focusses on the impacts of decommissioning, rehabilitation and monitoring must be included in the EP in accordance with regulation 17(1)(b) of the Environment Regulations. The consultation should cover all the proposed scenarios (from leaving in situ to full or partial removal, and not just the preferred scenario).

- *SMART Completion Criteria:*

  DMIRS expects to see rehabilitation completion criteria in the EP. These criteria should be set out as SMART (specific, measurable, achievable, relevant, timebound) criteria.

- *Monitoring:*

  EPs should contain details of the monitoring post-decommissioning and pre-title surrender that the registered holder intends to conduct. This should be risk-based and may vary from case to case. DMIRS expects annual reporting on monitoring activities with the potential for adaptive management if / when needed.

DMIRS will only consider the surrender of a title when all obligations are satisfied including the fulfilment of all decommissioning and rehabilitation commitments and expectations to the satisfaction of the Minister. This may include the full removal of all property, equipment and infrastructure and the restoration of the Earth's crust to the satisfaction of the Minister (see for example section 98(2) of PGERA).

Registered holders incur liability for actions (or in-actions) performed on their title, including the preparing for and undertaking of decommissioning. The financial resources of a prospective transferee who is not currently on title (in part, to address the decommissioning obligations and liabilities) are a key consideration of each application to transfer a title. New and prospective registered holders need to be cognisant of the obligations and liabilities attached to the title they are acquiring.

Field Management Plans and Geothermal Energy Recovery Development Plans

Planning for the decommissioning of infrastructure and rehabilitation of the environment should begin when a petroleum or geothermal activity is first proposed. Item 16 of Schedule 3 of the Petroleum and Geothermal Energy Resources (Resource Management and Administration) Regulations 2015 establishes that a Field Management Plan (FMP) is to incorporate the plans and timing for decommissioning and rehabilitation of the field. Item 15 of Schedule 4 of the Petroleum and Geothermal Energy Resources (Resource Management and Administration) Regulations 2015 states the requirement for a Geothermal Energy Recovery Development Plan (GERDP) to include a description of the registered holder's plans for closure of the geothermal resources areas, including plans for decommissioning and rehabilitation.

A FMP is required before the recovery of petroleum. Similarly, geothermal energy may be recovered under a geothermal production licence only in accordance with the approved GERDP. These plans need to include a description of facilities and infrastructure consistent with that recorded in the Safety Management System and EP documents.

Generic development well design(s) and completion concepts should be discussed in the FMP or GERDP. Note that full details on each individual well need to be included in a Well Management Plan (WMP), and all WMPs need to be consistent with the FMP or GERDP at every stage of the well life.

With respect to decommissioning, FMPs and GERDPs must include the following:

- Details of the estimated timing of decommissioning and closure;
- A description of the plans for closure and field decommissioning including:
  - How each well will be decommissioned and how the reservoir will be isolated; and
  - Plans for infrastructure, flowlines and production processing facilities and progressive decommissioning; and
- A description of how the title area will be rehabilitated.

Detailed planning for decommissioning should occur well in advance to cessation of production, while the field is still generating cash flow. An indicative guide would be to establish the final holistic detailed decommissioning plan five years prior to cessation of production. This information should be accompanied by estimates on remaining resources.

Changes to how a field is being managed necessitates a revision of the FMP or GERDP for that field. These revisions will need to include updates of the decommissioning program and any changes to estimated forecast recovery rates or estimation of earlier cessation of production that had previously been provided.

DMIRS expects property, equipment or infrastructure that is no longer in use to be appropriately maintained and progressively decommissioned over time. A new or revised FMP or GERDP should demonstrate proactive and progressive decommissioning plans.

Pipeline Licences

Pipelines interconnect fields, service multiple operators and registered holders and cross various boundaries of regulatory controls including WA onshore areas, State coastal waters and Commonwealth waters. The decommissioning of onshore infield flowlines (from wells to a flowline manifold or to processing facilities) and offshore infield flowlines and offshore infrastructures (e.g. production platforms) are to be covered within EPs and FMPs.

The PPA applies to WA onshore areas and the PSLA applies to WA State coastal waters. Section 23(2)(d) of the PPA and section 104(2)(c) of the PSLA provides that the Minister shall not give consent to a surrender of an instrument, unless the operator or registered holder, has removed or caused to be removed from the area to which the surrender relates all property brought into that area by any person engaged or concerned in the operations authorised by the instrument.

All onshore and subsea pipelines including associated facilities and structures within the pipeline licence area and on the seabed are to be removed. Any damage to the land, seabed or subsoil in that area is to be made good and compatible to the surrounding environment. The removed sections of the pipeline, subsea pipeline and associated pipeline facilities and structures are to be taken onshore in respect to a subsea pipeline and considered for disposal and / or recycled in respect to all pipelines.

Section 23(3) of the PPA and section 104(3) of the PSLA provides for the Minister to provide consent to a surrender of a pipeline licence if they are satisfied that although the operator or registered holder has not complied with the removal requirements and that special circumstances exist that justify the giving of the consent.

A pipeline that may be a candidate for in-situ decommissioning and abandonment will be considered on a case-by-case basis. It is the operator and / or registered holder's responsibility to demonstrate that all feasible decommissioning and removal options have been considered and a comparable assessment made taking into consideration of risks and factors associated with the environment, safety, risks to future users of the area and future ownership and liability for the abandoned pipeline, prior to forwarding a request to the Minister for exemption to the removal requirements of the PPA or the PSLA.

An exemption to the removal requirement may be provided for parts of a pipeline where a like for like agreed environmental outcome can be proven in an ecologically sustainable manner consistent with post-activity land-uses or subsea ecology, without unacceptable liability to the State. The existing pipeline licence will remain in force and the operator or registered holder will remain fully responsible to continue to monitor and maintain the pipeline's integrity for possible future reuse.

A subsea pipeline licence granted under the PSLA covers that part of the pipeline that extends from the mean low water mark on the WA coastal baseline to the 3 nautical mile (NM) limit, seaward from the WA coastal baseline. Where the pipeline extends seaward beyond the 3 NM limit, that part of the pipeline is covered under a pipeline licence granted under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGSA) (Cth) which is administered by the National Offshore Petroleum Titles Administrator (NOPTA) and the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

It is expected that where a pipeline is to be decommissioned and removed that impacts both the PSLA and OPGGSA, that the operator and / or registered holder will obtain consent from DMIRS, NOPTA and NOPSEMA prior to any decommissioning works being undertaken.

Well Management Plans

DMIRS encourages WMPs and EPs for decommissioning to be provided at the same time for assessment. This assists DMIRS in gaining a full understanding of the proposed decommissioning activities and reduces the occurrence of requests for further information.

A WMP should include a description of the arrangements that will be in place for the permanent plugging or closing off of the well(s), including removal of wellhead and Christmas tree, installation of an environmental plug and monitoring.

Revisions to the WMP must be approved for each new activity that is planned for the well. Decommissioning is the final activity in the life of a well and therefore the final revision to the WMP will be the decommissioning program.

An approved WMP will remain in place until the well has been permanently plugged or closed off. The final well activity report (FWAR) is submitted to DMIRS on completion of plugging or closing off. The FWAR is reviewed prior to surrender of the title and the title can only be surrendered if the Minister is reasonably satisfied with the written report of the plugging or closing off process.

Definitions

Activity	A petroleum activity or a geothermal activity.
Cessation of production	When there is no further activity and no future use identified in relation to any property, equipment and infrastructure within the title area notwithstanding care and maintenance activities.
Ecologically Sustainable Development	Using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased[1]. The principles of ecologically sustainable development[2] are: • Decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations. • If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. • The principle of inter-generational equity – that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations. • The conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making. • Improved valuation, pricing and incentive mechanisms should be promoted.
Environment	a) Ecosystems and their constituent parts, including people and communities; b) Natural and physical resources; c) the qualities and characteristics of locations, places and areas; and d) the heritage value of places, and includes the social, economic and cultural features of the matters mentioned in paragraphs (a), (b), (c) and (d).

1 National Strategy for Ecologically Sustainable Development 1992
2 Section 3A of the *Environment Protection and Biodiversity Conservation Act 1999*

Definitions

Environment Plan	In relation to an activity, means an environment plan submitted by the operator of the activity that is approved and revised from time to time but does not include: • if the environment plan is approved in part — that part of the plan that is not approved; or • an environment plan for which the approval has been withdrawn.
Environmental Impact	Any change to the environment, whether adverse or beneficial, that wholly or partly results from an activity of an operator.
Environmental Risk	The chance of something happening that will have an adverse environmental impact, measured in terms of the environmental consequences and the likelihood of those particular consequences occurring.
Field Management Plan	A plan submitted by the licensee or applicant for a licence, for the recovery of petroleum from a petroleum pool that is approved and revised from time to time.
Geothermal Activity	• Any operations or works carried out in the State under a geothermal instrument; or • Any other operations or works carried out in the State relating to geothermal exploration or development which may have an environmental impact, and includes (but not limited to): – seismic or other surveys; – drilling; – hydraulic fracturing; – construction and installation of a facility; – operation of a facility; – modification of a facility; – decommissioning, dismantling or removing a facility; and – processing or conveyance of geothermal energy.
Geothermal Energy Recovery Development Plan	A plan submitted by the licensee or applicant for a licence, for the recovery of geothermal energy resources from a title area that is approved and revised from time to time.

Definitions

Operator	• If there is a person recorded by the Minister as the operator of the activity; or • In any other case: – If there is a petroleum instrument or geothermal instrument for the activity - the person responsible to the instrument holder for the overall management and operation of the activity (whether or not the activity has commenced); or – If there is no petroleum instrument or geothermal instrument for the activity - the person carrying out the activity.
Petroleum Activity	• Any operations or works carried out in the State under a petroleum, geothermal or pipeline instrument; or • Any other operations or works carried out in the State relating to petroleum exploration or development which may have an environmental impact, and includes (but not limited to): – seismic or other surveys; – drilling; – hydraulic fracturing; – construction and installation of a facility; – operation of a facility; – modification of a facility; – decommissioning, dismantling or removing a facility; and – processing, conveyance and storage of petroleum.
Registered Holder	In relation to a permit, drilling reservation, lease, licence, special prospecting authority or access authority, means the person whose name is for the time being shown in the Register as being the holder of the permit, drilling reservation, lease, licence, special prospecting authority or access authority. Can be any of the following: • a permittee; • a lessee; • a licensee; or • any other authority holder, under the Petroleum Acts.
Well Management Plan	A plan submitted by the operator, for the activity to be carried out in relation to a well, that is approved and revised from time to time.

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8.30am – 4.30pm

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