

Approval notice and statement of reasons

Petroleum (Environment) Regulations 2016 (NT) (Regulations)

Interest holder	Central Petroleum Ltd ABN 95 009 718 183
Petroleum interest(s)	Operating Licence 4 (OL4) and Operating Licence 5 (OL5)
Environment management plan (EMP) title	Mereenie Field Workover and Wellhead Equipment, Safety Systems and Gathering Line Activities
EMP document reference	CTP4-3
DEPWS EMP assessment document reference	NTEPA2020/0068-007~0006
Regulated activity	Well workovers on 25 wells and upgrades to wellheads, safety systems and gathering lines
Is the EMP a new plan submitted under reg 6 or a revision of a current plan submitted in accordance with reg 18?	This EMP is a new plan submitted under regulation 6.
Was the regulated activity referred ¹ for consideration of whether environmental impact assessment was required?	No
Was environmental impact assessment required and by which assessment method?	N/A
Has an environmental approval under the <i>Environment Protection Act 2019</i> been issued for the regulated activity	N/A
Has an Authority Certificate under the <i>Northern Territory Aboriginal Sacred Sites Act 1989</i> been issued for the regulated activity?	Yes Authority Certificate C2020/023
Date an EMP compliant with reg 8 was first submitted under reg 6	10 July 2020
Date within which the EMP was published for comment under reg 8A, if applicable	N/A
Date further information was required and submitted under reg 10, if applicable	Required 4 August 2020, submitted 28 August 2020 (CTP4-2) Required 15 September 2020, submitted 18 September 2020 (CTP4-3)
Date of resubmission notice under reg 11(2)(b), if applicable	N/A
Date EMP was resubmitted under reg 11(3), if applicable	N/A
Date a notice setting out a proposed timetable for consideration of the EMP was issued under reg 11(2A) if applicable	N/A
Proposed timetable given in notice under reg 11(2A) if applicable	N/A
Where provided under s 29B of the <i>Northern Territory Environment Protection Authority Act 2012 (NT) (NT EPA Act)</i> , the dates the Northern Territory Environment Protection Authority (NT	Date of Minister's request for advice: 25 February 2019 Date of NT EPA Advice: 21 September 2020

¹ This means a referral under the *Environment Protection Act 2019 (NT)* or the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* (EPBC Act).

EPA) was requested to, and provided, advice on
EMP

Date of decision

6/10/2020

Decision maker



Signature

Hon Eva Dina Lawler MLA,
Minister for Environment

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1. The EMP is approved. reg 11(2)(a)
2. The approval is subject to the following conditions: reg 12(2)

Condition 1: The interest holder must submit to the Department of Environment, Parks and Water Security (DEPWS) an updated timetable for the regulated activity prior to the commencement of the activity and provide an updated timetable to DEPWS each quarter following commencement. The timetable must include dates for the conduct of the activity and implementation of time-bound commitments.

Condition 2: The interest holder must provide an annual report to DEPWS on its environmental performance, in accordance with item 11(1)(b) in schedule 1 of the Petroleum (Environment) Regulations 2016 (NT). The first report must cover the 12 month period from the date of this approval, and be provided within three calendar months of the end of the reporting period. The annual environment performance report must align with the template prepared by DEPWS for this purpose and must include a signed declaration by the interest holder or operator.

- a. **Condition 3:** The interest holder must submit to DEPWS within one month of this approval a groundwater monitoring plan that includes all five groundwater wells currently being monitored in the Mereenie Field, to demonstrate there is no change in groundwater quality as a result of activities in the Mereenie Field. The groundwater monitoring plan should be consistent with the sampling method and data management sections of the *Preliminary Guideline: Groundwater Monitoring Bores for Exploration Petroleum Wells in the Beetaloo Sub-basin* and is to include:
 - i. monitoring of all five groundwater bores currently being monitored under the approved Mereenie Field EMP
 - ii. monitoring twice per year, within one month of the end of each of the dry season and the wet season, with the wet season period defined in the Code of Practice
 - iii. a location map (and associated spatial files) showing each of the five monitoring bores relative to the Mereenie Field
 - iv. continuation of the monitoring program while the EMP remains in force

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- v. use of data collected in the first three years to develop site-specific performance standards for groundwater quality and interquartile ranges for analytes at each of the monitoring bores
- vi. use of ANZECC livestock guideline trigger values in the interim and notification of any exceedance of these trigger values to DEPWS within five days of receipt of laboratory report analyses
- vii. review of the monitoring program and the site-specific performance standards with DEPWS after three years
- viii. a commitment to provide groundwater monitoring reports and data to DEPWS annually.

2 Material considered

1. The following material has been taken into account in making this decision:
 - a. Mereenie Field Workover and Wellhead Equipment, Safety Systems and Gathering Line Activities EMP, dated September 2020.
 - b. The principles of ecologically sustainable development (ESD) referenced in the *Environment Protection Act 2019* (NT).
 - c. The NT EPA advice provided at my request under s 29B of the NT EPA Act.
 - d. The Authority Certificate issued under the *Northern Territory Aboriginal Sacred Sites Act 1989* (NT) and associated response provided by the Aboriginal Areas Protection Authority.
 - e. The Code of Practice: Onshore Petroleum Activities in the Northern Territory (Code) as defined in regulation 4A.

3 Statement of reasons

1. The EMP meets the approval criterion in regulation 9(1)(a), because it contains all the information required by Schedule 1 of the Regulations. reg 9(1)(a)
2. The EMP meets the approval criterion in regulation 9(1)(b) for the following reasons: reg 9(1)(b)
 - a. The nature of the regulated activity is as follows:
 - i. conduct of workovers and upgrades to wellheads, safety systems and gathering lines on existing wells, within an operating petroleum field
 - ii. ancillary activities to support the regulated activity, such as waste management, transport and use of existing accommodation facilities
 - iii. emergency decommissioning of wells, noting planned decommissioning of wells is an activity under the approved Mereenie Field EMP
 - iv. non-routine flaring during workover activities
 - v. no additional land clearing, with all activities to occur at existing well sites.
 - b. The scale of the regulated activity is as follows:
 - i. workovers to occur in a staged approach, targeting five wells per year, for an estimated three months per year
 - ii. upgrades to wellheads, safety systems and gathering lines to occur in a staged approach, for an estimated two months per year
 - iii. use of an estimated 0.32 ML of groundwater per year and an estimated 2,000 L of potable water per well for hydrotesting piping prior to use
 - iv. negligible increase in traffic movements, through use of existing infrastructure and personnel at the Mereenie Field
 - v. contribution of 4,500 tonnes carbon dioxide equivalent (tCO₂-e) greenhouse gas (GHG) emissions per year, representing a 0.028% increase in the total annual greenhouse gas emissions for the NT
 - c. The EMP contains an appropriate level of detail for the nature and scale of the activities proposed. The regulated activity is clearly described. The description of the existing environment is informed by ongoing operations in the Mereenie Field, adequate field surveys and desktop assessments. Uncertainty relating to environmental data is clearly stated. The identification of environmental impacts and risks is comprehensive and contains a sufficient level of detail to inform the

assessment. The EMP provides detail on environmental outcomes and performance standards, implementation strategy, personnel, emergency response plan, stakeholder engagement, legislative requirements, recording, monitoring, reporting and notifications, to an appropriate level of quality and applicability.

- d. Having regard to the above, the information in the EMP is appropriate for the nature and scale of the regulated activity to which it relates.

3. The EMP meets the approval criterion in regulation 9(1)(c) for the following reasons: reg 9(1)(c)

- a. In making my decision, I have considered regulation 5A, which requires that I give fundamental consideration to the principles of ESD, including the decision-making principle (s 18 *Environment Protection Act 2019* (NT)) as follows:

- i. The EMP does not involve drilling and hydraulic fracturing; however the public was made aware that the EMP was under assessment via the DEPWS website.
- ii. The EMP adequately assesses the environmental impacts and risks associated with the regulated activity and outlines appropriate avoidance and mitigation measures, to ensure no long-term adverse impacts to the environment in which the activity is conducted. The regulated activity is considered low impact and small scale and is to be undertaken in a planned and measured way, for a total of five months per year. The EMP focus is on maintaining well integrity through maintenance activities and undertaking routine activities to allow ongoing use of existing wells into the future. In this way, the interest holder is demonstrating its consideration of maximising use of existing resources in the Mereenie Field, rather than establishing new wells, and developing petroleum production so that the optimum value of the resource is returned to the Territory as required under the *Petroleum Act 1984* (NT).
- iii. The Mereenie Field was developed in 1984 and the interest holder has been operating in the Alice Springs region for many years. The interest holder conducts regular and effective engagement with the Aboriginal communities whose land the regulated activity is conducted on, and the Central Land Council, in accordance with the Regulations. Stakeholder communication logs demonstrate ongoing community satisfaction with no concerns raised.
- iv. I believe the information regarding the proposed regulated activity adequately enables the integration of both long-term and short-term environmental and equitable considerations.

- b. In making my decision, I have considered regulation 5A, which requires that I give fundamental consideration to the principles of ESD, including the precautionary principle (s 19 *Environment Protection Act 2019* (NT)) as follows:

- i. The regulated activity does not pose a threat of serious or irreversible environmental damage arising from the regulated activity and there is a satisfactory scientific basis to assess potential impacts and risks.
- ii. The EMP demonstrates adherence to the Code that establishes best practice management measures for operations. In addition, the interest holder has proactively adopted mitigation controls to manage risks such as erosion due to wet season operations or early onset of the wet season, including implementation of a site-specific Wet Season Management Plan.
- iii. The EMP outlines the interest holder's investigations into the physical, biological and cultural environment and demonstrates a sound understanding of the environment of the Mereenie Field, providing a satisfactory scientific

- basis to assess potential environmental impacts and risks for the activity, and to identify measures to avoid or minimise those impacts and risks.
- iv. I have imposed a condition focussed on groundwater monitoring to increase understanding of the regionally important Mereenie Sandstone Aquifer. The monitoring must be compliant with the Code.
 - v. The precautionary principle has been considered in assessing the regulated activity. The regulated activity does not pose a threat of serious or irreversible environmental damage.
- c. In making my decision, I have considered regulation 5A, which requires that I give fundamental consideration to the principles of ESD, including evidence-based decision-making principle (s 20 *Environment Protection Act 2019* (NT)) as follows:
- i. The EMP demonstrates an adequate understanding of the environment in which the regulated activity will be undertaken, and considers all relevant aspects of the environment that have potential to be affected. As the activity is focussed on existing wells and no land clearing is proposed, a focus is on wastewater and waste management and chemical transport, storage and use.
 - ii. The EMP aligns with the requirements of the Code, including tracking of wastewater use and transfer on site. Consideration has also been given to requirements under the *Radiation Protection Act 2004* (NT), and the interest holder has an approved Radiation Management Plan, informed by a comprehensive assessment in September 2019 of naturally occurring radioactive materials across the Mereenie Field, which confirmed the site has radiation hazard levels 1000 times lower than the recommended public exposure limit.
 - iii. An Erosion and Sediment Control Plan (section 7.6) is complemented by a Wet Season Management Plan, which provides additional mitigations for avoiding mobilisation of soils during the wet season.
 - iv. A Bushfire Management Plan (BMP) has been included in the EMP (Appendix 5). The BMP incorporates mitigation controls already used by the interest holder in the Mereenie Field.
 - v. Potential impacts and risks from spills are adequately mitigated through the Spill Management Plan (section 7.4) and use of existing fit-for-purpose facilities in the Mereenie Field. The Emergency Response Plan considers procedures and processes for large spills and leaks, and all spills are to be remediated.
 - vi. Traffic impacts including traffic flow and composition have been assessed to be negligible, with peak workforce periods requiring less than 10 additional transport movements per day. The interest holder has also committed to preparation of a Traffic Management Plan for assessment by the Department of Infrastructure, Planning and Logistics.
 - vii. The EMP has undergone review and assessment by NT Government agencies. Feedback from NT Government agencies was forwarded to the interest holder and has been adequately addressed through amendments to the EMP.
 - viii. The proposed regulated activity has been informed by careful consideration of production requirements and the longevity of the Mereenie Field. The long history of petroleum activities in the Mereenie Field affords the interest holder with a detailed and reliable knowledge of the potential environmental

impacts and risks and the most appropriate measures for mitigation of those impacts and risks.

- ix. I believe the information regarding the proposed regulated activity adequately provides the best available evidence in the circumstances that is reliable and relevant to the decision-making process.
- d. In making my decision, I have considered regulation 5A, which requires that I give fundamental consideration to the principles of ESD, including the principle of intergenerational and intra-generational equity (s 21 *Environment Protection Act 2019* (NT)) as follows:
 - i. The potential environmental impacts and risks associated with the regulated activity can be adequately avoided or managed through the management measures and monitoring programs proposed in the EMP.
 - ii. Protection of cultural interests is achieved through compliance with the requirements of an Authority Certificate (C2020/023) issued by the Aboriginal Areas Protection Authority under the *Northern Territory Aboriginal Sacred Sites Act 1989* (NT) and there is limited potential for disturbance to archaeological heritage as no new land clearing is to occur. However, appropriate measures are proposed for the management of items of heritage value should they be discovered.
 - iii. The proactive measures included in the EMP regarding bushfire and weed management (such as fuel monitoring and weed surveys and control) will have an overall positive impact on the condition of the environment for future generations.
 - iv. The interest holder has undertaken stakeholder engagement with landholders and land managers, Traditional Owners and the Central Land Council, in accordance with regulation 7 and schedule 1 item 9 of the Regulations.
 - v. The EMP commits the interest holder to progressive rehabilitation throughout the life of the activity which, combined with the Code requirements and the broader Mereenie Field EMP, is considered to have reduced the risks to biodiversity and soil contamination to ALARP and acceptable levels.
 - vi. The regulated activity will improve production and safety in the field and ensure long term well integrity, thereby potentially preventing future environmental harm or long term adverse impacts to the environment, while also continuing to provide social and economic benefits to current and future generations of the Aboriginal landholders.
 - vii. The environmental burdens of the regulated activity will not disproportionately affect particular stakeholders. The interest holder proposes to flare for up to three days for each well on which workover activities are conducted (15 days per year), which is estimated to generate 300 tonnes of carbon dioxide equivalent (tCO₂-e) per well per day. This will contribute to an overall increase in NT greenhouse gas emissions of approximately 0.028% per year.
 - viii. Cumulative impacts of groundwater extraction have been assessed and will be regulated by a water extraction licence under the *Water Act 1992* (NT) which the interest holder has applied for.
 - ix. The environmental values will be protected in the short and long term from the activities outlined in the EMP and the health, diversity and productivity of the environment will be maintained for the benefit of future generations. Accordingly I do not believe that the carrying out of the regulated activity in

accordance with the EMP would have an effect contrary to the principle of inter or intra-generational equity.

- e. In making my decision, I have considered regulation 5A, which requires that I give fundamental consideration to the principles of ESD, including sustainable use of natural resources (s 22 *Environment Protection Act 2019* (NT)) as follows:
 - i. I consider that cumulative GHG emissions generated by the regulated activity are not significant when considering the regulated activity will result in an overall increase in NT GHG emissions of approximately 0.028% per year.
 - ii. I note the Northern Territory Government's commitment to implementing all recommendations of the Hydraulic Fracturing Inquiry, including seeking to ensure that there is no net increase in lifecycle greenhouse gas emissions GHG emitted in Australia from any onshore petroleum produced in the NT.
 - iii. The interest holder has assessed the cumulative impacts of groundwater use in the Mereenie Sandstone Aquifer (52.8 ML per year for all activities in the Mereenie Field, inclusive of 0.32 ML per year for the regulated activity in this EMP), and this represents 0.46% of the total volume of current extraction licenses issued for all users of the Mereenie Sandstone Aquifer. I have imposed a condition focussed on monitoring of groundwater quality for the life of the EMP.
 - iv. I note that an estimated 14 tonnes of steel per well (if not contaminated with naturally occurring radioactive materials) will be available for recycling, as a result of the workover activities and replacement of infrastructure.
 - v. Accordingly, I am satisfied that the concept of sustainable use of natural resources has been taken into account.
- f. In making my decision, I have considered regulation 5A, which requires that I give fundamental consideration to the principles of ESD, including the conservation of biological diversity and ecological integrity (s 23 *Environment Protection Act 2019* (NT)) as follows:
 - i. I believe the information I have regarding the existing biodiversity and ecosystems that are to be affected by the regulated activity, the effects that are likely, and the mitigation measures reasonably available, are sufficient.
 - ii. The regulated activity does not require land clearing, and the potential impacts and risks of the activity identified in the EMP do not pose a significant risk to threatened species at a population level. Specific and adequate measures for protection of wildlife are included in the EMP.
 - iii. The EMP includes environmental sensitivity maps for each well site in the Mereenie Field, using recent aerial photography, which demonstrate the location of conservation significant flora and fauna and weeds are known and the maps can also be used to determine the specific environmental sensitivities requiring protection in the event of a spill to the environment.
 - iv. Two known natural springs are known to be located on the south-eastern and north-eastern margin of the Mereenie Field, on drainage lines that feed Parke Creek. The interest holder has assessed the potential impact of groundwater extraction and concluded there is sufficient separation to avoid impact on the springs. Further, an assessment of the whole of the site was undertaken to assess potential for other springs and groundwater dependent ecosystems to be present, and it was concluded there is a low potential to support groundwater dependent ecosystems and there is no naturally occurring permanent surface water in the Mereenie Field.

- v. The EMP considers fauna species listed as threatened, migratory or marine under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) Act and conservation significant fauna under the *Territory Parks and Wildlife Conservation Act 1976* (NT). Based on field surveys in 2000, 2014 and 2020 the interest holder has demonstrated the regulated activity is highly unlikely to have an impact on these species as they have not been recorded in the Mereenie Field's operational area. The DEPWS Flora and Fauna Division is satisfied that that the proposed regulated activity does not pose a significant risk to threatened species, important habitats or significant vegetation types. Mitigation controls identified in the EMP are adequate to reduce risks associated with vehicle strike, dust, erosion and/or spills to as low as reasonably practicable, in relation to potential impacts on biodiversity.
- vi. The EMP outlines measures to minimise impacts on affected environmental values, including the management of threatening processes such as weeds and fire. Where relevant, management measures for the aforementioned threatening process are consistent with the requirements of the Code, the *NT Land Clearing Guidelines*, the *Weed Management Planning Guideline: Onshore Petroleum Projects* and Commonwealth threat abatement plans and advice.
- vii. The conservation of biological diversity and ecological integrity is vital to the achievement of ecologically sustainable development. Given the fundamental nature of this consideration, I have given central importance to the conservation of biodiversity and ecological integrity in weighing whether I am satisfied the approval criterion in regulation 9(1)(c) has been met.
- viii. If carried out in accordance with the EMP, the risks of the regulated activity to the conservation of ecological integrity and biological diversity are considered to be mitigated to an acceptable level.
- g. In making my decision, I have considered regulation 5A, which requires that I give fundamental consideration to the principles of ESD, including the promotion of improved valuation, pricing and incentive mechanisms (s 24 *Environment Protection Act 2019* (NT)) as follows:
 - i. In accordance with the 'polluter pays principle':
 - (1) The interest holder has committed to the remediation of impacts of the regulated activity, as is set out in the EMP.
 - (2) If the interest holder fails to remediate the impacts, an environmental rehabilitation bond has been provided by the interest holder, which is considered to be adequate to cover the resulting costs.
 - (3) As with any business undertaken in the NT, the interest holder is required to pay full life cycle costs for goods and services used.
 - (4) The EMP considers progressive rehabilitation after workovers at individual well sites are completed, through backfilling of trenches and flare pits, where they are no longer required for long term operations and restoring the land surface to a stable state. Rehabilitation of the broader Mereenie Field will ultimately be conducted through the Mereenie Field EMP.
 - ii. I do not believe that the carrying out of the regulated activity in accordance with the EMP would have an effect contrary to the principle of improved valuation, pricing and incentive mechanisms.
- h. The NT EPA did not require the EMP to be referred under the *Environment Protection Act 2019* (NT), as the regulated activity does not have the potential to

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cause a significant impact to the environment. The regulated activity is low impact and occurs at existing well sites within an operational petroleum field.

- i. The NT EPA has provided the following in relation to the regulated activity and the EMP:
 - i. In accordance with my request under s 29B of the NT EPA Act, the NT EPA reviewed the EMP for the regulated activity against the approval criteria in regulations 9(1)(b), 9(1)(c) and 9(2)(a) of the Regulations and other matters the NT EPA considered relevant, and has provided advice about the EMP.
Relevantly:
 - (1) The NT EPA recommended that should the EMP be approved, it be subject to three conditions. The NT EPA's recommendations have informed the conditions of this approval. All conditions are outlined in section 1 (2) of this Approval Notice.
 - (2) The NT EPA concluded that the EMP for the regulated activity, subject to the recommended approval conditions, is appropriate for the nature and scale of the regulated activity and demonstrates that the regulated activity can be carried out in a manner that environmental impacts and environmental risks of the activity will be reduced to a level that is as low as reasonably practical and acceptable.
 - ii. I have considered the NT EPA's advice and recommendations and these have been incorporated where relevant into the comments in this statement of reasons and the conditions in the Approval Notice.
- j. The existing environment along with its particular values and sensitivities is appropriately identified in Section 5 and Appendix 7 of the EMP, and to the extent I do not agree or there is some uncertainty, I have imposed conditions to address the relevant risk or risks. reg 9(1)(c)
- k. I agree with the risk assessment set out in Section 6 of the EMP, and to the extent I do not agree I have imposed a condition or conditions to address the relevant risk or risks. The cumulative effects of the regulated activity have been identified and assessed to the extent possible.
- l. The interest holder's risk assessment is applicable to activities in all seasons and the outcomes are reflected in the EMP that includes a weed management plan; bushfire management plan; wastewater management plan; rehabilitation management plan; emergency response plan; stakeholder engagement management plan; spill management plan; wet season management plan and a methane emissions management plan. The EMP also includes the required elements for the ongoing management of erosion and sediments in accordance with the erosion and sediment control plan. This is consistent with the requirements of the Code that allows for the regulated activity to occur in the wet season months when contingency planning is provided.
- m. The EMP demonstrates how the interest holder will comply with relevant requirements of the Code in undertaking the regulated activity. This includes reference to applicable Australian and international standards that have been adopted for the regulated activity, as applicable. The EMP cross references relevant sections of the Code that apply to the mitigation and management measures to enable the reviewer to identify and confirm that the proposed activities comply with the Code, as applicable. The EMP provides water management commitments and management plans that meet the requirements of the Code.

- n. I am satisfied that the interest holder has conducted ongoing stakeholder engagement in accordance with the Regulations. The EMP provides details of stakeholder engagement that meets regulation 7 and Schedule 1, Clause 9 of the Regulations (Section 11 and Appendix 6). Stakeholder engagement records (Appendix 6) demonstrate that stakeholders did not raise objections about environmental impacts of the proposed activity that required specific changes from the interest holder. The risk assessment in the EMP details the potential environmental impacts of the activity and proposed environmental outcomes to manage impacts on social and cultural surroundings.
- o. I recognise the importance the community places on the protection of water, human health management of chemicals and waste, stakeholder engagement, social impacts and regulation and compliance. The EMP appropriately identifies the risks and potential impacts from the regulated activity and commits to mitigation and management measures to address these risks and potential impacts.
- p. There are no environmental impacts or environmental risks relating to the proposed regulated activity that I consider to be unacceptable.
- q. Overall, having regard to the above, I am satisfied that the EMP demonstrates that the regulated activity is to be carried out in manner by which the environmental impacts and environmental risks are reduced to a level that is:
 - i. as low as reasonably practicable; and
 - ii. acceptable.