

## *Echo Yodel Subsea Decommissioning Environment Plan*

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### **1. Purpose of this report**

NOPSEMA has accepted Revision 4 of the Echo Yodel Subsea Decommissioning Environment Plan (the EP) submitted by Woodside Energy Ltd (the titleholder) for the removal of the Echo Yodel subsea infrastructure in the North-West region of Australia over the 2022 to 2026 period.

Revision 0 of the Echo Yodel and Capella Plugging and Echo Yodel Decommissioning EP was submitted by Woodside in April 2020. The scope of this EP was for the plugging and abandoning of the Yodel-3, Yodel-4 and Capella-1 wells and for leaving the Echo Yodel subsea infrastructure in-situ on the titles. NOPSEMA requested further written information from Woodside in June 2020 and following resubmission of the EP, decided in November 2020 that it was not reasonably satisfied that the EP met the acceptance criteria of the Environment Regulations. This was primarily due to the EP not demonstrating that acceptance criteria could be met by leaving the Echo Yodel subsea infrastructure on the titles.

To progress the plugging and abandoning of the wells, Woodside submitted a separate EP in December 2020 which included the activity of permanently plugging and abandoning the Yodel-3, Yodel-4 and Capella-wells and removing all associated well infrastructure above the mudline. The Echo Yodel and Capella Plugging for Abandonment Environment Plan was accepted by NOPSEMA in March 2021 (NOPSEMA Reference 5488).

In December 2021, following further studies, consultation with stakeholders and feedback from NOPSEMA, Woodside resubmitted Revision 3 of the Echo Yodel Subsea Decommissioning Environment Plan which describes the activity of removing the Echo Yodel subsea infrastructure. The infrastructure includes a 23km pipeline, an electrohydraulic umbilical, two umbilical termination assemblies, an infield umbilical termination basket, a pig launcher and infield electrical and hydraulic jumpers.

This report explains how NOPSEMA took into account matters that may be of interest to the public and accompanies the accepted EP submitted by Woodside Energy Ltd, which is available on the NOPSEMA website and should be referred to for further information.

#### **1.1. Information relevant to NOPSEMA's decision:**

In making the decision to accept this EP, NOPSEMA took into account:

- the Environment Regulations;
- NOPSEMA Assessment Policy (PL0050), Environment Plan Assessment Policy (PL1347) and Environment Plan Decision Making Guidelines (GL1721);
- NOPSEMA Section 572 regulatory Policy (PL1903)
- the Department of Industry, Science, Energy and Resources (DISER) Guideline: Offshore petroleum decommissioning
- the Echo Yodel Subsea Decommissioning Environment Plan Revision 4;
- the information raised by relevant persons, government departments and agencies that is relevant to making a decision; and

- relevant plans of management and threatened species recovery plans developed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and relevant guidance published by the Department of Agriculture, Water and the Environment.

## 2. Next steps

Responsibility for the ongoing environmental performance of the activity remains, at all times, with Woodside Energy Ltd.

NOPSEMA has legislated responsibilities to inspect and investigate offshore petroleum and greenhouse gas storage activities, and to enforce compliance with environmental law. These functions will be applied to this activity in accordance with NOPSEMA's policies.

## 3. Sensitive Information

Sensitive information received during the consultation period, such as the names and contact details of commenters and specific information identified by the commenter or relevant person as 'sensitive', is not published in this report. Sensitive information is contained in a sensitive information part of the EP which has been considered by NOPSEMA during its assessment process.

## 4. Further information

If you would like further information about the activity, please contact the titleholder's nominated liaison person specified in the EP and on NOPSEMA's webpage for the Echo Yodel Subsea Decommissioning.

If you would like to be notified of regulatory information on the activity, such as start and end dates and enforcement actions (if any), please subscribe to updates from the [Industry Environment Plans](#) page on NOPSEMA's website.

## How NOPSEMA has taken into account key matters raised during the assessment and decision-making process for Echo Yodel Subsea Decommissioning Environment Plan

#	Matter	Titleholder response	NOPSEMA's assessment and decision
1	The safe and environmentally responsible removal of, or otherwise satisfactorily dealing with, infrastructure from the offshore area that was previously used to support oil and gas operations.	<p>Woodside commenced consultation with relevant persons on the decommissioning of the Echo Yodel subsea infrastructure in 2017, following cessation of operations in 2012. Following a comparative assessment workshop in 2019 with stakeholders, Woodside determined that the preferred decommissioning end state was to leave the infrastructure in-situ. This was primarily because of the habitat that had grown on the infrastructure and the benefits this provided to commercial fishing activities.</p> <p>Following feedback from NOPSEMA and a further assessment of the decommissioning options available, Woodside now propose to remove all the Echo Yodel infrastructure and dispose of this onshore</p> <p>Woodside has undertaken additional engineering studies and determined that the condition of the pipeline does not preclude removal within the decommissioning timeframe presented in the EP (2022 to 2026).</p> <p>Options to remove the pipeline and the electrohydraulic umbilical include subsea cut and recover, reverse reel lay and reverse s-lay. To determine the infrastructure recovery methods, studies have been undertaken such</p>	<p>NOPSEMA recognises the importance of ensuring oil and gas operators meet their decommissioning obligations as required under Sect 572 of the OPGGS Act.</p> <p>When the EP was initially submitted in 2020, Woodside proposed that the Echo Yodel subsea infrastructure be left in-situ. During the course of the assessment, NOPSEMA raised matters relating to the acceptability of leaving infrastructure in-situ and noted:</p> <ul style="list-style-type: none"> <li>• The requirement for infrastructure to be removed when no longer in use nor to be used (Section 572(3) of the OPGGSA)</li> <li>• The default decommissioning requirement (i.e. the base case) described in DISER's Guideline: Offshore petroleum decommissioning and NOPSEMA policy (PL1903) is the complete removal of all property</li> <li>• The potential impacts from the long-term degradation of the pipeline which may result in the release of plastics</li> <li>• Uncertainty of the benefits of the infrastructure providing habitat given that is expected to bury over time and corrode</li> <li>• Uncertainty on the stability of the infrastructure in extreme weather conditions as it degrades over time.</li> </ul>

	<p>as a pipeline corrosion assessment and a pipeline coating study. Further studies will also be undertaken such as analysis of existing pipeline welds and the impact of pipeline burial on recovery operations. To determine the preferred method, feedback will also be sought from contractors that are currently going through a tender process to undertake the decommissioning work. The final recovery method may be one or a combination of the above methods.</p> <p>The EP assesses the impacts and risks for each of the removal methodologies. Woodside concluded that with control measures in place such as notifying relevant stakeholders prior to the commencement of activities; and implementing an infrastructure disposal and resource recovery strategy, the impacts and risks will be managed to as low as reasonably practicable (ALARP) and be of an acceptable level.</p>	<p>Given the uncertainty on the long term impacts and the requirement to remove infrastructure that is no longer in use as the base case, NOPSEMA required Woodside to consider previously rejected control measures such as removal of infrastructure.</p> <p>Following feedback from NOPSEMA, consultation with stakeholders and further studies, Woodside revised the EP with a proposal to remove all of the Echo Yodel subsea infrastructure.</p> <p>NOPSEMA has noted that the removal of the pipeline will be by one of the three methods described in the EP (or a combination of these). NOPSEMA has concluded that the process for determining the removal method is reasonable, is being adequately informed by further studies, and considers technical feasibility, safety risks and environmental impacts. It is noted that additional information on the removal procedures will be included in a safety case submitted to NOPSEMA for acceptance prior to the execution of the activity.</p> <p>This EP has also addressed indirect impacts and risks associated with the management and disposal of waste material generated from the removal activities. To ensure these impacts and risks are adequately managed, control measures such as implementing an infrastructure disposal and resource recovery strategy have been adopted.</p> <p>After taking into consideration the information provided in the EP, NOPSEMA has concluded that the decommissioning activity is being managed to ALARP and acceptable levels.</p>
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