Bass Strait Operations Environment Plan

1. Purpose of this report

NOPSEMA has accepted the Bass Strait Operations Environment Plan (the EP) submitted by Esso Australia Resources Pty Ltd (the titleholder) for the operations activities in the Bass Strait region for the next five years.

Throughout the assessment period, NOPSEMA has provided the titleholder with reasonable opportunity to modify and resubmit the EP, and has requested further information from the titleholder. NOPSEMA has since completed its assessment of the EP and has determined that it is satisfied that the EP meets the criteria for acceptance[1] on 20 May 2021.

This report explains how NOPSEMA took into account key matters that are addressed and managed by the titleholder through the EP, including matters of interest to the wider community.

This report accompanies the accepted Bass Strait Operations Environment Plan and associated documents submitted by Esso Australia Resources Pty 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, some of the key considerations included NOPSEMA took into account:

- the Environment Regulations;
- NOPSEMA Assessment Policy (PL0050), Environment Plan Assessment Policy (PL1347), Environment Plan Decision Making Guidelines (GL1721), Section 572 Maintenance and Removal of Property Policy (PL1903) and other published NOPSEMA guidance.
- the Bass Strait Operations Environment Plan which includes the titleholder's Oil Spill Emergency Plan and Operational and Scientific Monitoring Plan;
- the information raised by relevant persons, government departments and agencies that is relevant to making a decision;
- 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 the Environment and Energy.

2. Next steps

Responsibility for the ongoing environmental performance of the activity remains, at all times, with Esso Australia Resources Pty 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.

[1] Environment Regulations, Regulation 10A Criteria for acceptance of environment plan

3. 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 Bass Strait Operations activity.

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 Underway Offshore page on NOPSEMA's website.

How NOPSEMA has considered key matters raised during the assessment and decision-making process for the Bass Strait Operations EP

#	Matter	Titleholder response	NOPSEMA's assessment and decision
1	Concern regarding the plans and arrangements in place for the maintenance and removal of all structures, property and equipment neither used nor to be used in connection with operations	The Bass Strait offshore operations consists of 421 wells, 19 platforms, five subsea facilities (four existing and one proposed) and ~600 km of subsea pipeline. Production of hydrocarbons has ceased at ten (10) platforms, three (3) subsea facilities, sixteen (16) pipelines and over half of all wells drilled. Production is scheduled to cease at a further six (6) platforms and seven (7) pipelines by 2025. A detailed inventory of all structures, equipment and property including wells is provided in Volume 2, Appendix A. Details of the maintenance philosophy, current status and provisional end state of this inventory is provided in Volume 2, Appendix B. Section 2.4.4 of the EP provides detailed information regarding the inspection, maintenance and repair activities of facilities, pipelines and subsea facilities. Section 3.1 provides an overview of approach and timing for decommissioning and includes a description of: • The use of a heavy lift vessel campaign to complete decommissioning of property	NOPSEMA recognises the importance of ensuring oil and gas titleholders meet their decommissioning obligations as required under section 572 of the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*. NOPSEMA acknowledges the potential for increased safety and environmental risks, if the activity is not appropriately managed by having suitable arrangements and plans in place for maintenance and removal of property and equipment that is neither used nor to be used. As part of the EP assessment, NOPSEMA required a detailed inventory of all property and equipment, details of the decommissioning and maintenance strategies, timing and planning basis for removal of all property and equipment that is no longer used nor to be used in connection with operations to demonstrate compliance with section 572 of the Act. Separately and in addition to the EP assessment, as part of implementing NOPSEMAs decommissioning compliance plan, Esso have also been issued with General Direction 817 under

		• Activities required to prepare facilities for decommissioning including well plug and abandonment and facility preparation • Planning required for completing decommissioning of this scale • Information about provisional end states • Schedule for submission of future regulatory approval documents and indicative schedule for completing decommissioning activities	Section 574 of the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* to ensure certainty and assurance regarding decommissioning activities to be completed.
2	Concern regarding the management of produced formation water (PFW) generated during operations	Esso has identified and evaluated the potential impacts associated with discharging produced formation water (PFW) from the Esso Bass Strait facilities in Volume 2, Section 6.3 of the EP. Detailed supporting information has also been provided in Volume 2, Appendix F. Environmental performance outcomes, control measures, environmental performance standards and measurement criteria for managing the discharge of PFW have been outlined in Volume 4, Table 1-1.	NOPSEMA acknowledges the importance of ensuring that the potential impacts from discharging PFW from the Esso Bass Strait facilities are reduced to levels which are acceptable, and as low as reasonably practicable (ALARP). During the course of the assessment, NOPSEMA required Esso to identify the extent, severity and duration of potential impacts associated with the planned discharge of PFW. This has resulted in identification of the mixing zone boundary for a given discharge regime, which is based on an individual platform's PFW discharge volume, receiving environment hydrodynamics, chemical composition, and toxicity. Potential impacts to all relevant receptors have been identified and evaluated as part of this process. Esso has also committed to monitoring potential impacts to receptors through the implementation

			of an in-situ water and sediment quality monitoring program for each platform discharging PFW. To ensure that risks and impacts will be continuously managed to levels which are acceptable and ALARP, a suitable adaptive management framework (including timely and appropriate triggers for activating additional control measures) has been clearly described in the EP. Given the information provided in the EP, NOPSEMA is satisfied that the details and evaluation of potential impacts associated with the discharge of PFW are appropriate to the nature and scale of the activity. The proposed control measures for reducing potential impacts from the discharge of PFW are considered appropriate and ALARP.
3	Concern regarding the plans and arrangements in place for effective oil spill response preparedness	Esso evaluated hydrocarbon spill risks of the operation and maintenance of its oil and gas production facilities in Bass Strait in Volume 2, Sections 7.5 to 7.7 of the EP. Volume 2 Section 7.2.1 details Esso's approach to oil spill modelling to support the risk assessment and outcomes of stochastic modelling are applied to define the total area that could be exposed to hydrocarbons (i.e. the potentially exposed area) based on worst-case spill scenarios.	NOPSEMA acknowledges the importance of ensuring that hydrocarbon pollution risks are reduced to as low as reasonably practicable and that in the unlikely event of a spill, appropriate arrangements and capabilities are in place to ensure a timely and effective response. During the course of the assessment NOPSEMA required Esso to provide further information about the activity's spill risks including potential worst-case spill scenarios, the risk evaluation method and Esso's spill response arrangements

		Control measures for reducing the likelihood of a hydrocarbon spill from the operation of vessels, pipelines and platforms in Bass Strait are presented in Volume 2, Sections 7.5, 7.6 and 7.7 respectively. Esso's oil spill response needs, capability and ALARP assessment for the activity is presented in Volume 3. Control measures to manage the impacts and risks of a spill response are also detailed in Volume 3 with the specific response arrangements and capability presented in the OPEP (Volume 3, Appendix A). Additional information on spill monitoring needs and capability is presented in the Bass Strait Oil Spill Monitoring Plan (Volume 3, Appendix B).	and capability and demonstration of ALARP. In response to this, Esso made several modifications to the risk evaluation including providing more information on the range of oil types and potential spill scenarios across the activity facilities, clarifying the risk assessment method, adding risk evaluations for pipelines and shut-in wells and removing inconsistencies in the spill risk evaluations. Esso also revised the analysis and information provided on its spill response needs and capabilities assessment, application of modelling to response planning and ALARP assessment for the adopted response strategies, and particularly the arrangements for source control, monitoring, dispersants, shoreline protection and clean-up and waste management. Given the information provided in the EP, NOPSEMA is satisfied that the details and evaluation of impacts and risks of hydrocarbon spills is appropriate to the nature and scale of the spill risks. The proposed control measures for reducing the impacts and risks of a spill and arrangements and capability for responding to a spill incident, including monitoring impacts, are considered appropriate and ALARP.