

# Acceptance of Crux Development Drilling Environment Plan

Document No: A1069680

Date: 18 April 2024

1. On 22 December 2023, I, [REDACTED], Environment Manager – Drilling and Spill Risk within the National Offshore Petroleum Safety and Environmental Management Authority (**NOPSEMA**), delegate of the Chief Executive Officer of NOPSEMA decided, pursuant to regulation 10 of the then in force *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (the 2009 Environment Regulations)*, to accept the Crux Development Drilling Environment Plan (Document No: 2200-010-HX-5880-00001, Revision 6, dated 9 November 2023) (**EP**).
2. The EP was submitted by Shell Australia Pty Ltd (ACN 009 663 576) (**titleholder**), to enable the titleholder to undertake the drilling of up to five (5) development wells for the Crux Project within Commonwealth Petroleum Production Licence AC/L10 (**activity**).
3. The reasons for my decision are set out below. All references to a regulation (**reg**) are to the 2009 Environment Regulations unless otherwise stated.

## Legislative framework

4. The legislation relevant to my decision is set out in **Attachment B**.

## Background

5. On 29 July 2022, the titleholder submitted an EP (Document No: 2200-010-HX-5880-00001, Revision 2, dated 26 July 2022) to NOPSEMA in accordance with reg 9 of the 2009 Environment Regulations.
6. On 11 August 2022 NOPSEMA provisionally decided in accordance with reg 9AA of the 2009 Environment Regulations that the plan included material apparently addressing all of the provisions in Division 2.3 and published the plan on NOPSEMA's website in accordance with reg 9AB of the 2009 Environment Regulations.
7. On 12 September 2022, NOPSEMA made a request for further information, pursuant to reg 9A of the 2009 Environment Regulations. NOPSEMA also made two additional requests for further information on 3 October 2022 and 12 December 2022.
8. Having provided further information in response to these requests, the titleholder re-submitted the EP on 28 July 2023 (Document No: 2200-010-HX-5880-00001, Revision 5) incorporating the additional information pursuant to reg 9A(3) and modifications pursuant to reg 10.
9. On 14 September 2023, NOPSEMA made an additional request for further information. In response to this request, the titleholder re-submitted the EP on 10 November 2023 (Document No: 2200-010-HX-5880-00001, Revision 6, dated 9 November 2023) incorporating additional information pursuant to reg 32(3) and modifications pursuant to reg 33, of the 2009 Environment Regulations. The EP that is the subject of this decision is document 2200-010-HX-5880-00001, Revision 6.

## Materials

10. The materials which NOPSEMA considered in making this decision are set out in **Attachment C** and are referenced where relevant in the reasons below.

## Decision Overview

11. The issue before me was whether the EP should be accepted pursuant to reg 10 of the 2009 Environment Regulations. In making this decision, I took into account and considered the advice and recommendations from NOPSEMA's assessment team.
12. Prior to considering whether I was reasonably satisfied that the EP met the criteria in reg 10A, I considered whether the EP complied with Division 2.3, which sets out the matters which must be included in an EP.
13. I was satisfied that the EP contained the matters in Division 2.3. My reasons for this part of my decision are set out at [18] – [44] below.
14. In accordance with reg 5G(2) of the 2009 Environment Regulations, I must not accept an EP unless I am reasonably satisfied that the titleholder is compliant with subsection 571(2) of the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (the **OPGGG Act**) in relation to the petroleum activity, and the compliance is in a form that is acceptable to NOPSEMA. On review of the titleholder's financial assurance declaration and confirmation forms, I was reasonably satisfied that the titleholder had demonstrated financial assurance in accordance with the requirements of reg 5G(2).
15. I then considered whether I was reasonably satisfied that the EP met the criteria in reg 10A.
16. If reasonably satisfied that the EP met the criteria in reg 10A, I must accept it. However, if not reasonably satisfied that the Environment Plan met the criteria in reg 10A, I must:
  - a. give the titleholder the opportunity to resubmit the EP; or
  - b. refuse to accept the EP; or
  - c. accept the EP in part for a particular stage of the activity; or
  - d. accept the EP subject to limitations or conditions applying to operations for the activity.
17. I considered that the criteria in reg 10A were all satisfied and I therefore accepted the EP. My reasons for this part of my decision are set out at [45] – [138] below.

## Findings

### Does the Environment Plan comply with Division 2.3?

18. Reg 12 of the 2009 Environment Regulations requires that an EP must include the matters set out in reg 13, 14, 15 and 16. As I was satisfied that the EP met regs 13, 14, 15 and 16 (for the reasons set out individually below), I was satisfied that reg 12 was met and the EP complied with Division 2.3.

### Environmental assessment: regulation 13

#### *Regulation 13(1) - Description of the petroleum activity*

19. Reg 13(1) requires the EP to contain a comprehensive description of the activity including details of each activity and stage, general details and layout of the facilities, operational details and proposed timetables.

20. The EP addressed each of these matters in Section 6 of the EP ('Description of the Activity') and included the following information:
- a. the description of the activity, which is the installation of a drilling template and docking piles, and the drilling of up to five development wells within the area covered by Commonwealth Petroleum Production Licence AC/L10. The activity also includes the ongoing management (inspection, maintenance and repair) of the wells (noting that future well completion, commissioning and production phases must be provided for in separate EPs).
  - b. the location of the petroleum activity is clearly set out in the EP by reference to high quality maps containing the relevant petroleum production licence and operational area (Section 6.2) and coordinates of the approximate location of the Crux drill centre (Figure 6-1). The activity is located within the Crux in-field development area, as defined in the Crux Project Offshore Project Proposal (**OPP**) (Document No. HSE\_CRU\_014827, Revision 7, dated 19 June 2020). The Operational Area (**OA**) where the petroleum activity is being conducted is located approximately 160 km from northwest Australia and approximately 620 km north-northeast of Broome, in approximately 170 m water depth (mean sea level). The nearest island to the OA is Cartier Island, which is approximately 105 km to the north-west;
  - c. the activity will be undertaken using a moored semi-submersible mobile offshore drilling unit (**MODU**), a light construction vessel will be used for installation of the drilling template and docking piles, and support vessels will be used for re-supply and for other logistical and operational activities. Representative specifications for each type of vessel are provided in the EP (Section 6.4.3 and Section 6.4.5);
  - d. information considered relevant for the consideration of environmental impacts and risks of the petroleum activity. Key aspects of the description included the following:
    - i. timing and duration of the petroleum activity, including a description of the stages of the activity, which may occur any time between 2023 and 2028. The estimated duration of drilling is approximately 10 months, with an additional 10-month contingency period provided for in the EP. Installation of the drilling template is estimated to take less than 24 hours and installation of the docking piles is estimated to take 1 week (Section 6.3). Continuous operations are planned during drilling activities (24 hours, per day, seven days per week). Vessel-based activities (such as ROV operations) for ongoing well management could occur at any time following the temporary suspension of the wells, for a short duration (days);
    - ii. general details of the construction and layout of the facility and infrastructure involved in the petroleum activity, including the MODU, project vessels, remotely operated vehicles (**ROVs**), helicopters, wells and subsea infrastructure (Section 6.4);
    - iii. a description of the target hydrocarbon (Crux condensate) and its physical/chemical characteristics (Section 9.14.2);
    - iv. planned emissions and discharges from the petroleum activity, including underwater noise, lighting, atmospheric emissions, greenhouse gas emissions, seabed disturbance, liquid effluent discharges, and drill cuttings, mud and other drilling-related discharges, as well as the physical presence of the MODU and support vessels (Section 9); and
    - v. the EP also evaluates unplanned releases of hazardous and non-hazardous wastes, unplanned vessel movements, introduction of invasive marine species, as well as emergency events ranging from a marine diesel spill as a result of a fuel tank rupture following a vessel collision to an uncontrolled condensate release from a loss of well control (Section 9).

21. Based on the findings above, I was reasonably satisfied that the EP contained a comprehensive description of the petroleum activity that met the requirements of reg 13(1).

**Regulation 13(2) and (3) - Description of the environment that may be affected**

22. Reg 13(2) and (3) requires the EP to describe the existing environment that may be affected by the activity including the particular relevant values and sensitivities (if any) of that environment.

23. The EP addressed each of these matters in Section 7 of the EP. I noted that the titleholder referred to Section 6 (referred to as "Master Existing Environment") of the Crux Project OPP, in accordance with reg 31. As per the requirements of reg 31(2A), the information referred to by the titleholder is publicly available and the EP includes a link to the place where the information is published. I took this information into consideration in determining whether the EP included a description of the environment that may be affected.

24. Specifically, the EP described and included the following information:

- a. a thorough description of the physical and biological environment, and details of relevant values and sensitivities, that may be affected by the petroleum activity, including under emergency conditions;
- b. the description of the environment encompasses the OA and a broader 'Planning Area' (Figure 7-1), which has been defined by the maximum extent of possible contact with hydrocarbons at low concentrations (Table 9-65), based on stochastic modelling of the worst-case spill scenario (Section 9.14);
- c. that the activity or any part of the activity will not be undertaken in any part of a declared World Heritage Property or National Heritage Place, nor a declared *Ramsar* wetland within the meaning of the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*, as described in section 3.2.4 of the EP;
- d. values and sensitivities within the OA have been identified and described, including:
  - i. that the OA does not overlap with any Australian Marine Parks (**AMPs**), State marine parks, management areas and reserves, Commonwealth heritage places and Wetlands of international or national importance (Section 7.3 and Appendix C);
  - ii. that the OA intersects with biologically important areas (**BIAs**) for EPBC Act listed species, including the foraging BIA for the whale shark (Section 7.3.5);
  - iii. that the OA does not overlap with any key ecological features (**KEFs**), as defined in the North-west Marine Bioregional Plan (Section 7.3.2);
  - iv. presence of listed threatened species, and listed migratory species under the EPBC Act, including 13 threatened and/or migratory fish, sharks and ray species; seven threatened and/or migratory marine reptile species; eight threatened and/or migratory marine mammal species; 12 threatened and/or migratory shorebirds and seabird species; and no listed threatened ecological communities (Section 7.3.5 and Appendix C). No listed threatened ecological communities were identified to occur within the OA; and
  - v. social, economic and cultural features of the environment within the OA have been identified and described (where identified) relating to cultural heritage, cultural and social values, commercial fisheries, traditional fisheries, tourism and recreation, commercial shipping, telecommunications, defence and oil and gas activities, specifically:

- A. four Commonwealth-managed fisheries were identified as overlapping with the OA, including the North West Slope Trawl Fishery, Southern Bluefin Tuna Fishery, Western Skipjack Tuna Fishery and Western Tuna and Billfish Fishery. The North West Slope Trawl Fishery was identified as having a potential for interaction within the OA (Section 7.4.4);
  - B. four Western Australian-managed fisheries were identified as overlapping with the OA, including the Mackerel Fishery, Northern Demersal Fishery, West Coast Deep Sea Crustacean Fishery and Pearl Oyster Fishery. The Mackerel Fishery and Northern Demersal Scalefish Fishery were identified as having a potential for interaction within the OA (Section 7.4.4);
  - C. no aquaculture operations are known to occur within the OA (Section 7.4.4);
  - D. no traditional Indonesian fishing activities are expected to be presented within the OA (Section 7.4.4);
  - E. tourism and recreation activities (including charter boat activities and recreational fishing) are not expected to be present within the OA (Section 7.4.5);
  - F. no other oil and gas developments or facilities are located within the OA. In addition, no designated commercial shipping fairways or major shipping routes are located within the OA (Section 7.4.7 and Section 7.4.9);
  - G. there are no designated military/defence exercise areas that intersect with the OA (Section 7.4.6); and
  - H. no Native Title claims or determinations, or Indigenous Land Use Agreements (**ILUAs**) were identified within the OA. In addition, no cultural archaeology was identified within the OA (Section 7.4).
- e. values and sensitivities within the Planning Area, have been identified and described, including:
- i. two World Heritage Areas, six Commonwealth Heritage places and three national heritage places were identified as occurring within the Planning Area (Section 7.3.6);
  - ii. seven Ramsar wetlands were identified as overlapping with the Planning Area (Table 7-5). The Ashmore Reef Marine Park Ramsar site is the closest site to the activity, located 160 km from the OA (Section 7.3.4).
  - iii. 15 AMPs (Table 7-17) were identified as overlapping with the Planning Area. The Kimberley AMP is the closest AMP to the activity, located 93 km from the OA (Section 7.3.6). In identifying values and sensitivities of the relevant AMPs, the EP has had regard to the North Marine Parks Network Management Plan and North-west Marine Parks Network Management Plan;
  - iv. numerous State and NT Marine Parks (**MPs**) were identified as overlapping with the Planning Area (Table 7-17). The North Kimberley MP is the closest MP to the activity, located 158 km from the OA (Section 7.3.6). In identifying values and sensitivities of the relevant MPs, the EP has had regard to the relevant State and Territory management plans;
  - v. 14 KEFs were identified as overlapping with the Planning Area (Table 7-4). The Ancient Coastline at 125 m Deth Contour KEF is the closest KEF to the OA (Section 7.3.2);
  - vi. numerous BIAs and Habitat Critical to the Survival of the Species (**HCTS**) for EPBC Act listed species were identified as occurring within the Planning Area (Section 7.3.5);
  - vii. presence of listed threatened species, listed threatened ecological communities, and listed migratory species under the EPBC Act, including 17 threatened and/or migratory fish, sharks and

ray species, nine threatened and/or migratory marine reptile species, 13 threatened and/or migratory marine mammal species, 65 threatened and/or migratory shorebirds and seabird species and no listed threatened ecological communities (Section 7.3.5 and Appendix C) and

viii. social, economic and cultural features of the Planning Area have been identified and described relating to cultural heritage, cultural and social values, commercial fisheries, traditional subsistence fisheries, tourism and recreation, commercial shipping, telecommunications, defence and oil and gas activities, specifically:

- A. six Commonwealth-managed fisheries were identified as overlapping with the Planning Area, including the Western Deepwater Trawl Fishery, Northern Prawn Fishery, Southern Bluefin Tuna Fishery, Western Skipjack Tuna Fishery, Western Tuna and Billfish Fishery and North-West Slope Trawl Fishery (Table 7-27);
- B. 15 Northern Territory managed fisheries were identified as overlapping with the Planning Area (Table 7-27);
- C. 14 Western Australian-managed fisheries were identified as overlapping the Planning Area (Table 7-27);
- D. aquaculture operations may be presented within the shallow waters of the Planning Area (Section 7.4.4);
- E. traditional Indonesian fishing may be present within the Planning Area. The 'Memorandum of Understanding Box', an area of Australian water in the Timor Sea where Indonesian traditional fisheries are permitted to operate, is located 70 km from the OA (Section 7.4.4);
- F. oil and gas facilities are located within the Planning Area. The closest facility to the OA is the Montara production Floating Production Storage and Offloading (**FPSO**) facility, which is located approximately 36 km north of the OA (Section 7.4.9).
- G. the Planning Area intersects the North Australian Exercise Area (**NAXA**) offshore training area, the Browse Basin (Curtin) and Northern Carnarvon Basin (Learmonth) offshore air-to-air weapons ranges and a Royal Australian Air Force base at Learmonth (North West Cape) (Section 7.4.6);
- H. a number of commercial shipping fairways and major shipping routes intersect the Planning Area (Section 7.4.7);
- I. tourism and recreation activities (including charter boat activities and recreational fishing) may be present within the Planning Area (Section 7.4.5); and
- J. Native Title determinations and Indigenous Land Use Agreements (**ILUAs**) are present within the Planning Area (Section 7.4.1.2). The values held by First Nations peoples have been described, where the values may occur within the Planning Area (Section 7.4). These values have been determined using multiple lines of evidence, including a review of available literature on First Nations values, an independent desktop assessment of the potential presence of First Nations underwater cultural heritage values within the Crux Project Area and consultation with First Nations relevant persons.

25. Based on the findings above, I was reasonably satisfied that the EP met the requirements in reg 13(2) and (3).

### **Regulation 13(4) - Requirements**

26. Reg 13(4) requires the EP to describe the requirements, including legislative requirements, that apply to the activity and are relevant to the environmental management of the activity; and demonstrate how those requirements will be met.
27. Section 3 of the EP identifies the Commonwealth and State/Territory legislative requirements that apply to the activity, as well as the relevant industry standards and guidelines, and international agreements and conventions. The evaluation of environmental impacts and risks in Section 9 of the EP provides a description of the legislative requirements that apply to the activity and are relevant to the environmental management of the activity, as well as providing a demonstration of how the requirements will be met. I considered that the EP included sufficient information on the legislation and environmental requirements that apply to the activity and demonstrate that they will be met throughout the life of the activity.
28. I was therefore reasonably satisfied that the EP met the requirements of reg 13(4).

### **Regulation 13(5) and (6) - Evaluation of environmental impacts and risks**

29. Reg 13(5) and (6) requires the EP to include details of the environmental impacts and risks for the activity; an evaluation of all the impacts and risks, appropriate to the nature and scale of each impact or risk; and details of the control measures that will be used to reduce the impacts and risks of the activity to as low as reasonably practicable (**ALARP**) and an acceptable level. The evaluation must evaluate all of the environmental impacts and risks arising directly or indirectly from all operations of the activity; and potential emergency conditions, whether resulting from accident or other reasons.
30. Section 9 of the EP detailed the environmental impacts and risks, including those arising from potential emergency conditions whether resulting from accident or any other reason, for the petroleum activity. The details of the environmental impacts and risks associated with receptors such as the physical environment, biological environment, and socio-economic and cultural environment (as detailed in Section 7) were provided for:
- a. planned activities such as:
    - i. physical presence of the MODU and support vessels, lighting, noise, atmospheric emissions, greenhouse gas emissions, seabed disturbance, liquid effluent discharges, drill cuttings, mud and other drilling-related discharges and contingency spill response operations; and
  - b. unplanned activities such as:
    - i. release of hazardous and non-hazardous wastes, unplanned vessel movements, introduction of invasive marine species and emergency events (loss of well control and vessel collision).
31. The EP included an evaluation of all the impacts and risks detailed in the EP, whether arising directly or indirectly, and including those arising from potential emergency conditions whether resulting from accident or any other reason, appropriate to the nature and scale of each impact or risk (Section 9). The impact and risk analysis process is described in Section 9.2 and includes assigning an impact consequence ranking for all impacts and risks and a likelihood rating for unplanned events/risks (Section 9.2.2). Together these were used to categorise planned and unplanned activities into a rating for the acceptability of the impact or risk. A description was provided in Section 9.2.4 about how the titleholder demonstrates that the impacts and risks will be managed to ALARP.
32. The outcome of the process for the impacts and risks identified in Section 9.2.1, is that the impacts and risks are considered to be acceptable when taking into account the application of control measures and considering the extent, severity and duration of any planned or unplanned impacts to environmental receptors. The full evaluation of each individual impact and risk is provided in Section 9 of the EP;

33. The EP included details of the control measures that will be used to reduce the impacts and risks of the petroleum activity to ALARP and to an acceptable level (Section 9). Control measures have been justified through evaluation considering additional, alternative, or improved controls.
34. The evaluation addressed matters of national environmental significance (**MNES**) protected under the EPBC Act, including World Heritage properties, National Heritage properties, *Ramsar* wetlands, listed threatened species and communities, listed migratory species, Commonwealth marine areas, and the Great Barrier Reef Marine Park. The other MNES protected under the EPBC Act are not applicable to the proposed petroleum activity, including nuclear actions and water resources affected by coal seam gas development and large coal mining development.
35. The EP sets out facts and evidence in support of the evaluations presented, which included, but is not limited to, the following:
- a. In relation to noise emissions:
    - i. the EP evaluates the impacts of underwater noise emissions associated with the petroleum activity, which are predominantly from the MODU, vessels, pile driving, helicopters and the acoustic positioning equipment. The EP references contemporary scientific literature and applicable modelling studies to inform the evaluation, as well as providing predictions of received levels of underwater noise in relation to biologically relevant thresholds; and
    - ii. a number of listed threatened and migratory cetacean species were identified as potentially occurring within the OA; however, no BIAs for cetaceans or marine turtles were identified to overlap with the OA. The nearest BIA for cetaceans is the pygmy blue whale migration BIA, which is approximately 120 km from the OA and for turtles, the green turtle interesting buffer BIA is approximately 85 km from the OA. Relevant recovery plans and conservation advice, including the Conservation Management Plan for the Blue Whale and the Recovery Plan for Marine Turtles in Australia 2017-2027 have been considered in the evaluation.
  - b. In relation to greenhouse gas (**GHG**) emissions:
    - i. the EP evaluates the impacts of GHG emissions associated with the petroleum activity, including emissions generated by the MODU and vessels (Section 9.12). The evaluation recognises the petroleum activities' contribution to the global scale of GHG emissions and acknowledges the cumulative nature of global GHG emissions;
    - ii. the EP clarifies that the extraction of gas for onshore processing is not included as part of the petroleum activity and therefore there are no GHG emissions associated with gas consumption/combustion which would be considered indirect consequences of the petroleum activity;
  - c. In relation to an unplanned release of hydrocarbons:
    - i. the EP (Section 9.14) evaluates the credible hydrocarbon spill scenarios that could occur during the petroleum activity, including a vessel collision resulting in a rupture of a fuel tank, and a release of condensate in the event of a loss of well integrity. The worst-case spill scenario identified would be a loss of well integrity resulting in a release of up to 220,000 m<sup>3</sup> of Crux condensate (Group 1) over a period of 80 days. The duration is based on the credible worst-case time required to control the well (drilling of a relief well) and the volume is based on the maximum credible rate of release derived from the proposed well design and reservoir characteristics; however, OPEP response arrangements are provided for immediate mitigation to reduce the duration and extent of any spill, including source control emergency response actions (e.g., capping stack);



- ii. Crux condensate is a light oil with a very low viscosity (Table 9-63). The condensate is composed of hydrocarbons that have a wide range of boiling points and volatilities at atmospheric temperatures, and which will begin to evaporate at different rates on exposure to the atmosphere. Evaporation rates will increase with temperature, but in general about 54.8% of the hydrocarbon mass is expected to evaporate within 12 hours; a further 22.8% should evaporate within 24 hours; and a further 14.6% should evaporate over several days. The residual fraction is described as an inert wax that will not evaporate and could persist at low concentrations for an extended period (Section 9.14.2);
- iii. the Planning Area was defined based on stochastic modelling of a subsea release of 206,240 m<sup>3</sup> of Crux condensate over 80 days, based on the modelling performed for the Crux Project OPP. The Planning Area is the potential spatial extent of surface, in-water, and shoreline accumulation hydrocarbons at low concentrations (Section 9.14.3) and reflects the range of socio-economic considerations for spill response planning and scientific monitoring. The Planning Area has been developed based on multiple weather and metocean conditions, therefore conservatively covers a much larger area than the area that is likely to be affected during any single spill event. That is because the Planning Area represents the total extent of all the locations where low hydrocarbon thresholds (Section 9.14.3) could be exceeded from all modelling runs (aggregate of 300 hypothetical spills). I noted that the modelled volume for the Crux Project OPP was 206,240 m<sup>3</sup>, and therefore the titleholder applied an additional 15% to the Planning Area, to capture any additional sensitive receptors that could be contacted in the event of a release of the worst-case 220,000 m<sup>3</sup> volume of condensate (Section 9.14); and
- iv. the outputs of the spill modelling were used to assess the environmental risk, by delineating which areas of the marine environment could be exposed to hydrocarbon levels exceeding hydrocarbon threshold concentrations (Section 9.14.3). A description was provided of the physical and chemical pathways and potential impacts of exposure to receptors in the event of a hydrocarbon spill (Section 9.14).

d. In relation to cultural features of the environment:

- i. Section 9 of the EP adequately evaluates the potential for the activity to affect cultural features of the environment (as described in Section 7 of the EP). The evaluation utilised multiple sources of relevant and suitable information, ranging from Native Title claims, determinations and ILUAs, IPAs, State/Territory and Commonwealth Marine Park Management Plans, publicly available databases on cultural heritage sites, published literature and supported through independent expert opinion;
- ii. the evaluation of impacts and risks to cultural features has also been informed by information that the titleholder gathered from First Nations relevant persons through the consultation process in preparation of the EP. The EP states that during consultation, First Nations relevant persons identified cultural sites which tended to be closer to the coast (Section 7.4.1.3) and that some First Nations relevant persons (for example, Bardi and Jawi Niimidiman Aboriginal Corporation, Walalakoo Aboriginal Corporation, and Wanparta Aboriginal Corporation) provided feedback in relation to the identification of cultural features that may be present in the Planning Area, such as species that may be of cultural significance to First Nations people (i.e., marine turtles, dugongs, sawfish, whales).

36. Based on the findings above, I was reasonably satisfied that the EP met the requirements of reg 13(5) and (6).

### *Regulation 13(7) - Environmental Performance Outcomes and Standards*

37. Reg 13(7) requires the EP to set environmental performance standards (**EPSs**) for the control measures; and set out the environmental performance outcomes (**EPOs**) against which the performance of the titleholder in protecting the environment is to be measured; and include measurement criteria that the titleholder will use to determine whether each EPO and EPS is being met.
38. I considered the EPOs, EPSs and measurement criteria provided in Section 9 of the EP and the OPEP and was satisfied that the:
- a. EPOs have been set which define performance for the management of the environmental aspects of the petroleum activity to ensure that environmental impacts and risks will be of an acceptable level. For example:
    - i. no mortality or injury of threatened and migratory MNES species as a result of underwater noise from the petroleum activities;
    - ii. no planned impacts to cultural heritage features within the OA as a result of the petroleum activities;
    - iii. no measurable impacts to sediment quality or water quality in the region from drilling discharges during the Crux development drilling activity;
    - iv. direct impacts to benthic habitats will be limited to < 0.1% of the Crux Project Area and no sensitive benthic habitats or sensitive receptors outside the Crux Project Area;
    - v. no introduction of IMS to the marine environment from ballast water exchange operations undertaken or biofouling by vessels carrying out petroleum activities; and
    - vi. no emergency events associated with the unplanned release of Crux condensate or vessel fuel to the marine environment during the Crux development drilling activity.
  - b. the EPOs presented in the EP were consistent with those outlined in the Crux Project OPP.
  - c. EPSs have been set for control measures identified as being necessary to reduce the environmental impacts and risks of the petroleum activity to ALARP and acceptable levels. For example:
    - i. Vessels comply with EPBC Regulations 2000 Part 8, Division 8.1 Interacting with cetaceans and the Australian National Guidelines for Whale and Dolphin Watching (2017) (EPS #3.1);
    - ii. All clump weights used to deploy GPS positioning array are recovered (EPS #4.4);
    - iii. Shell will implement a chance find process for unknown tangible underwater cultural heritage artifacts (EPS #4.7);
    - iv. Ballast water discharges will comply with the Australian Ballast Water Management Requirements (DAWE 2020a), which implements the requirements of the Biosecurity Act 2015 (Cth) and the International Convention for the Control and Management of Ships' Ballast Water and Sediments (of appropriate class) (EPS #6.4);
    - v. Chemicals that are planned for discharge to sea are substitution warning free and Gold, Silver, D, or E rated through the Offshore Chemical Notification Scheme (**OCNS**), or are Pose Little or No Risk to the Environment (**PLONOR**) (listed by the Oslo and Paris (**OSPAR**) Commission), or have a completed ALARP assessment (EPS #7.5); and
    - vi. Use only low sulphur fuel oil/ diesel (<0.5% m/m S) for vessels (EPS #10.1).
  - d. measurement criteria provided will allow the titleholder to determine whether each EPO and EPS is being met for the duration of the petroleum activity. For example:
    - i. Fauna observations and incident reports demonstrate no injury or mortality of listed Threatened or Migratory species as a result of underwater noise emissions within the OA;

- ii. Consultation records and/or management of change records show that any cultural heritage values identified within the OA are not significantly impacted as a result of the petroleum activities;
- iii. Records demonstrate that bulk barite was not discharged at the end of the activity;
- iv. Records show Synthetic Based Muds (**SBM**) justification process has been followed and SBM only used where technically required;
- v. GHG and National Pollutant Inventory reporting records maintained; and
- vi. Garbage record book maintained for project vessels as per Marine Order 95 demonstrates that there were no unpermitted discharges of solid waste as part of the petroleum activities.

39. Based on the findings above, I was reasonably satisfied that the EP met the requirements of reg 13(7).

#### Implementation strategy for the EP: regulation 14

40. In relation to the requirements in reg 14 regarding the implementation strategy, the EP includes:

- a. an implementation strategy (Section 10) for the activity in accordance with reg 14 of the 2009 Environment Regulations (reg 14(1));
- b. the timing for when the titleholder will report to NOPSEMA in relation to the titleholder's environmental performance for the activity, with the interval between reports not being more than one year. Section 10.5 outlines the routine reporting obligations to NOPSEMA, including annual environmental performance reporting (reg 14(2));
- c. a description of the environmental management system (**EMS**) for the activity in Section 4 and Section 10 of the EP, including specific measures to be used to ensure that, for the duration of the activity, the environmental impacts and risks of the activity continue to be identified and reduced to a level that is ALARP, control measures described in the EP are effective in reducing the environmental impacts and risks of the activity to ALARP and an acceptable level, and the EPOs and EPSs set out in the EP are being met. The EP review process and management of change process are described in Section 10 of the EP (reg 14(3));
- d. establishment of a clear chain of command, setting out the roles and responsibilities of personnel in relation to the implementation, management, and review of the EP, including during emergencies or potential emergencies. Section 10.2 of the EP outlines the organisational structure for the petroleum activity and the roles and responsibilities of key project team members. The chain of command and roles and responsibilities of key personnel involved in spill preparation and response are defined in Section 10.7.7 of the EP, and is consistent throughout the Browse Regional Oil Pollution Emergency Plan (OPEP) (Document No. HSE\_GEN\_016765, Revision 1) (reg 14(4));
- e. measures to ensure that each employee or contractor working on, or in connection with, the activity is aware of their responsibilities in relation to the EP, including during emergencies or potential emergencies, and has the appropriate competencies and training. Section 10.3 outlines the measures that are in place for ensuring employee and contractor competency, including the necessary awareness, training, and induction requirements to fulfil their duties. Section 10.7.7 of the EP defines the Shell Australia Emergency Management Structure and team responsibilities within this structure. Section 10.7.9 of the EP defines the emergency response training, competency, and exercise requirements to ensure the emergency response personnel are aware of their roles and responsibilities, including the source control incident management team (**IMT**) structure and competency requirements. Further details of personnel capability are provided in the Browse Regional OPEP (reg 14(5));
- f. provision for sufficient monitoring, recording, audit, management of non-conformance and review of the titleholder's environmental performance and the implementation strategy to ensure that the

EPOs and EPSs in the EP are being met. In particular, Section 10.4 outlines the process for performance monitoring, assurance actions (inspections and audits), and management of non-conformances (reg 14(6));

- g. sufficient monitoring of, and maintaining a quantitative record of, emissions and discharges (whether occurring during normal operations or otherwise), such that the record can be used to assess whether the EPOs and EPSs in the EP are being met. In particular, Table 10-3 outlines the approach to monitoring and record keeping for emissions and discharges (reg 14(7));
- h. an OPEP (the Browse Regional OPEP) with provision for the updating of the plan (reg 14(8));
- i. the Browse Regional OPEP outlines appropriate arrangements for responding to and monitoring oil pollution and includes:
  - i. the control measures necessary for timely response to an emergency that results or may result in oil pollution (source control for a loss of well control and a vessel spill, monitor and evaluate, oiled wildlife response, shoreline response, waste management, and operational & scientific monitoring) (Section 4 of the Browse Regional OPEP);
  - ii. the arrangements and capability that will be in place for the duration of the activity to ensure timely implementation of the control measures, including arrangements of ongoing maintenance of response capability (Section 4 of the Browse Regional OPEP). For example, Australian Marine Oil Spill Centre (**AMOSC**) participating membership, Oil Spill Response Limited (**OSRL**) membership, environmental service providers and labour hire agreements, vessel provider agreements and aviation services agreements;
  - iii. the arrangements and capability that will be in place for monitoring the effectiveness of the control measures and ensuring that the EPSs for the control measures are met (Section 4 of the Browse Regional OPEP); and
  - iv. the arrangements and capability in place for monitoring oil pollution to inform response activities (reg 14(8AA)) (Sections 8, 9 and 10 of the Browse Regional Operational and Scientific Monitoring Bridging Implementation Plan (Document No. HSE\_PRE\_16370, Revision 3, dated 27 July 2022));
- j. arrangements for testing the response arrangements in the Browse Regional OPEP that are appropriate to the response arrangements and to the nature and scale of the risk of oil pollution for the activity (reg 14(8A)) (Section 10.7.9 of the EP);
- k. the arrangements for testing the response arrangements, including a description of the objectives of testing, a proposed schedule of tests mechanisms to examine the effectiveness of response arrangements against the objectives of testing, and mechanisms to address recommendations arising from tests (Section 10.7.9 and Section 10.7.10 of the EP, and Attachment 1 and Attachment 2 of the Browse Regional OPEP (reg 14(8B));
- l. Section 10.7.9 of the EP describes a system of managing the schedule of tests for response arrangements. The schedule is reviewed and revised annually. Examples of the testing provisions include, but not limited to:
  - i. Notification exercise – test all communication and notification processes to service providers and regulatory agencies defined within the OPEP;

- ii. Equipment deployment exercise – focus on Shell’s deployment capability, inspect and maintain the condition of Shell’s oil spill response equipment and maintain training of field response personnel;
  - iii. Incident management exercise – activate IMT and establish command, control and coordination of a simulated Level 2 or 3 incident and test response arrangements in the OPEP; and
  - iv. Shell Global Response Support Network – test the functionality of Shell’s Regional Core Group Level 3 oil spill response capabilities;
- m. the OPEP provides for monitoring of impacts to the environment from oil pollution and response activities that is appropriate to the nature and scale of the risk of the environmental impacts and risks for the activity and is sufficient to inform any remediation activities (reg 14(8D)) (Section 4.7 of the Browse Regional OPEP, and the Browse Region Operational and Scientific Monitoring Bridging Implementation Plan);
- n. the arrangements in the OPEP are consistent with the national system for oil pollution preparedness and response (reg 14(11)) (Section 2 of the Browse Regional OPEP);
- o. provision for appropriate ongoing consultation during the implementation of the petroleum activity with relevant authorities of the Commonwealth, a State or Territory and other relevant interested persons or organisations. Section 5.8 outlines the arrangements for ongoing consultation. The EP also provides a program of ongoing engagement with First Nations groups (Section 8.11.1) (reg 14(9)); and
- p. the implementation strategy complies with the Act, the regulations and any other environmental legislation applying to the activity (reg 14(10)).
41. Based on the findings above, NOPSEMA is reasonably satisfied that the EP met the requirements of reg 14.

#### **Details of titleholder and liaison person: regulation 15**

42. I considered the EP (particularly Section 10.5.5) and found that it includes:
- a. details for the titleholder, including name, business address, contact details and Australian Company Number or ACN (within the meaning of the *Corporations Act 2001*) (reg 15(1));
  - b. details for the titleholder’s nominated liaison person including name and contact details (reg 15(2)); and
  - c. arrangements for notifying NOPSEMA of a change in titleholder, a change in the titleholder’s nominated liaison person or a change in the contact details for either the titleholder or the liaison person (reg 15(3)).
43. Based on the findings above, I am reasonably satisfied that the EP met the requirements of reg 15.

#### **Other information in the EP: regulation 16**

44. I considered that the EP met reg 16 as it contains:
- a. the titleholder's “Commitment and Policy on Health, Security, Safety, the Environment, and Social Performance” (Section 4);
  - b. the information required under reg 16(b), specifically a report on all consultations under reg 11A with any relevant person by the titleholder in Section 5, Appendix A and the sensitive information part of the EP, including:

- i. a summary of each response made by a relevant person (Table 5-10 and 5-12). The EP accepted by NOPSEMA (Version 6) contained text quoted directly from responses by relevant persons. The responses (specifically Table 5-12) have been redacted in the published EP;
  - ii. an assessment of the merits of any objection or claim raised during relevant persons consultation (see Table 5-12). The titleholder has identified claims and objections raised by relevant persons and assessed the merit of each objection or claim about the adverse impact of the activity described in the EP;
  - iii. a statement of the titleholder's response, or proposed response, if any, to each objection or claim (Table 5-12). Where there has been a claim or objection identified, the titleholder has provided a response or proposed response to each objection or claim that has been raised; and
  - iv. a copy of the full text of any response by a relevant person was included in the Sensitive Information Report.
- c. details of any reportable incidents in relation to the proposed activity (Section 10.5.2 of the EP).

## Should the Environment Plan be accepted?

45. Reg 10 requires that, when making my decision as to whether the EP should be accepted, refused or accepted in part or with conditions, I must consider the further information that the titleholders provided pursuant to requests made by NOPSEMA for that information. The information that I considered was contained in the re-submitted versions of the EP (as set out at [5] to [9])) which resulted in the final version of the EP (Revision 6).
46. Against this background (and having considered the materials at **Attachment C**), I made the following findings against each criterion for acceptance of the EP found in reg 10A.

### The EP is appropriate to the nature and scale of the activity: regulation 10A(a)

47. Section 6 of the EP includes a description of the scope and bounds of the activity. In particular, the EP provides details of the proposed location, spatial extent, timeframe, and duration of the described activities (see above at [20]). The EP also comprehensively describes the types and specifications of equipment and property that will be brought into the title areas and used to undertake the activity. I considered the activity to be described in sufficient detail to inform subsequent impact and risk assessment processes, including planned emissions and discharges, and potential unplanned discharges and releases resulting from emergency conditions. The EP appropriately provided more detail on the activity components with the greatest potential to generate impacts and risks to the environment.
48. I considered that Section 7 of the EP contained a thorough description of the environment, and appropriately addresses relevant values and sensitivities (including matters protected under Part 3 of the EPBC Act). I noted the description of the environment that may be affected includes areas that may be affected by potential emergency conditions in the event of an oil pollution incident (referred to as the 'Planning Area'), which is conservatively defined through stochastic modelling of the worst-case spill scenario (an uncontrolled release of condensate from a loss of well control scenario).
49. I considered the level of detail included in the EP to be appropriately scaled to the nature of the impacts and risks. A greater level of detail is included in the EP on the environment that may be affected by planned operations (OA), compared with the broader environment that may be exposed to low levels of hydrocarbon (in the unlikely event of a worst-case hydrocarbon release) (the 'Planning Area'). Specifically, the EP includes:

- a. a logical process that is applied to identify and describe the matters protected under Part 3 of the EPBC Act that may be present within the OA and Planning Area. The EP utilises relevant information to adequately inform and support the descriptions, such as information available on The Department of Climate Change, Energy, Environment and Water (**DCCEEW**) website including plans of management, threat abatement plans, threatened species recovery plans and marine bioregional plans (Section 7.3);
- b. a description of the key physical, biological, socio-economic and cultural features, values and sensitivities of the environment of the Commonwealth marine area. In particular, the EP applies a logical process to identify and describe these features, values and sensitivities of the environment that overlap with both the OA and the Planning Area. The EP utilises relevant references and information sources to adequately inform and support the descriptions, such as contemporary peer-reviewed scientific literature, quantitative modelling, and other authoritative sources (Section 7);
- c. a comprehensive description of First Nations cultural features and heritage values of the Planning Area (Section 7.4). In particular, I noted that:
  - i. the petroleum activity will occur in water depths of approximately 170 m. While parts of the Planning Area make contact with coastal and island shorelines and a seabed environment that is, and was previously, occupied by First Nations people, the 125 m depth contour represents the furthest extent of historical human habitation (Section 7.4.1.3) and the deeper offshore waters where the described activities will occur, were not inhabited as they have always been submerged. Given this there is limited potential for the presence of tangible First Nations underwater cultural heritage as defined under the *Underwater Cultural Heritage Act 2018* (**UCH Act**) in the OA;
  - ii. the description in the EP includes consideration of both tangible and intangible aspects of the cultural features of the environment and is supported by multiple sources of relevant and suitable information. A conservative approach was used to identify cultural features that may be affected by the activity, by applying a 50 km buffer to the extent of the Planning Area. The EP includes details of onshore native title claims, determinations and ILUAs made under the *Native Title Act 1993* (Table 7-19 and Table 7-20), Indigenous Protected Areas (**IPAs**) established as part of Australia's National Reserve System (Section 7.4.1.4), cultural values related information published in State/Territory and Commonwealth Marine Park Management Plans (Table 7-21), information on the broader concept of "sea country" (Section 7.4.2), and information collected through review of public databases such as the National Native Title Tribunal (**NTTT**) register of Native Title Registrations. The EP recognises that there are tangible and intangible elements of First Nations cultural and social values associated with marine protected areas located within the Planning Area, in particular IPAs. The EP also provided opportunities through relevant persons consultation to inform the description of the potential for First Nations cultural features within the environment that may be affected by the activity (Section 5);
  - iii. the description of cultural features of the environment has been informed by a review of publicly available databases and literature, consultation with First Nations relevant persons and an independent desktop assessment of the potential presence of First Nations underwater cultural heritage values within the Crux Project Area, conducted by Cosmos Archaeology (Section 7.4.1). I noted that the cultural heritage assessment found that the OA is located in an area which has always been underwater since human occupation, and as such, there will not be any impacts to tangible First Nations underwater cultural heritage from planned components of the activity (Section 7.4.1.3). The EP details the presence of cultural heritage sites in the Planning Area. For example, the titleholder conducted a search of WA Department of Planning Lands and Heritage (DPLH) Aboriginal heritage places dataset, which identified 440 Indigenous heritage places within the Planning Area (Appendix E);

- iv. the EP acknowledges the strong connection of First Nations people to sea country, as well as the existence of songlines along the coast of northern WA and the Northern Territory within the Planning Area. The EP recognises the presence of natural features across the Planning Area (such as islands, reefs, and coastline features) that form core components of Dreaming stories for First Nations people (Section 7.4.2.2.2). The EP acknowledges that many of the marine species found within the Planning Area are of totemic value and hold cultural significance to First Nations people; and
- v. consultation with First Nations relevant persons has supplemented knowledge of cultural features of the environment available through published research and literature. Based on the review of publicly available databases and literature, and information obtained from First Nations relevant persons during consultation, the titleholder identified a number of cultural features (Section 7.4.1) and cultural and social values (Section 7.4.2) including, but not limited to:
  - A. Land and sea tenure and ownership;
  - B. Ancient landscapes;
  - C. Indigenous Protected Areas;
  - D. Caring for Country;
  - E. Land and sea resource use practices; and
  - F. Indigenous Peoples rights and interest.

50. I also noted that a sufficiently robust method, consistent with internationally recognised standard ISO 31000:2018 Risk Management, has been applied in the EP for the identification and evaluation of environmental impacts and risks of the petroleum activity (Section 9.1.1). The detail and rigour applied to the environmental assessments (Section 9) is commensurate to the magnitude of the impacts and risks related to the petroleum activity, and the level of analysis and evaluation is proportionate to the nature and scale of the environmental impacts and risks generated by the petroleum activity.

51. I considered that there is a clear demonstration in the EP that the evaluation of impacts and risks informed the selection of suitable control measures appropriate for the nature and scale of the activity to either reduce the consequence/severity or likelihood of environmental impacts and risks.

52. The EP includes sufficient information on the legislative requirements that are relevant to the activity (Table 3-3). In addition, the environmental assessments (Section 9) include a description of how the relevant requirements are met throughout the life of the activity.

53. Based on the findings above, I was reasonably satisfied that the EP met the requirements of reg 10A(a).

**The EP demonstrates that the environmental impacts and risks of the activity will be reduced to as low as reasonably practicable: regulation 10A(b)**

54. Having regard to the EP, I considered that:

- a. Section 9.1 and 9.2 of the EP describes the process applied to evaluate whether impacts and risks are reduced to ALARP. A clear, systematic, and reproducible process for the evaluation of all impacts and risks is outlined, which details the control measures to be implemented, including an evaluation of additional potential control measures, and justifies why control measures are either adopted or rejected (with well-reasoned and supported conclusions) to demonstrate that the environmental impacts and risks of the activity will be reduced to ALARP. The evaluation of the adoption of control measures is based on environmental benefits and the consideration of the feasibility and cost/sacrifice of implementation.



- b. I considered that the titleholder has applied the environmental risk assessment process (described in Section 9.1 and 9.2) appropriately for planned aspects of the activity, in particular for higher order hazards associated with the activity, such as drilling-related discharges, seabed disturbance, light emissions and underwater noise emissions. I accepted that the exploration of alternative, additional or improved control measures had been evidenced, and that the control measures adopted demonstrate that environmental impacts will be reduced to ALARP.
- c. Unplanned aspects of the activity are described in Section 9 of the EP, including accidental release of hazardous and non-hazardous wastes, unplanned vessel movements, introduction of invasive marine species and emergency events (such as a loss of well control and vessel collision). These aspects are appropriately described and evaluated to give confidence that the control measures selected are appropriate and risks are reduced to ALARP.
- d. The evaluation of impacts and risks has informed the selection of suitable control measures to either reduce the consequence/severity or likelihood of impacts and risks. The control measures outlined in Section 9 of the EP are sufficiently detailed to demonstrate they will be effective in reducing the impacts and risks for the duration of the activity. The level of detail in the ALARP assessment is matched to the nature and scale of the potential impacts and risks. The EP has provided a reasonable demonstration that there are no other practical control measures that could reasonably be taken to reduce impacts and risks any further.
- e. The EP considers information gathered from the consultation process when demonstrating that impacts and risks are or will be reduced to ALARP. Section 9 of the EP addresses the risks and impacts raised by relevant persons. For example, the EP refers to advice from DCCEEW regarding the need to engage a maritime or underwater archaeologist to assist with identification and managing impacts to underwater cultural heritage under the *Underwater Cultural Heritage Act 2018* (Table 5-12, and Section 7.4.1.3). The EP evaluates impacts to underwater cultural heritage and includes environmental performance standards (EPS #4.7) and control measures that address an Underwater heritage 'chance find' process (Section 9.6). I am satisfied that impacts and risks described in the EP will be reduced to ALARP based on that evaluation and those control measures that will be implemented.
- f. In relation to an unplanned release of hydrocarbons, I considered that the EP demonstrated that this specific risk is reduced to ALARP because:
  - i. The Browse Regional OPEP presents the evaluation of potential impacts and risks from an unplanned release of hydrocarbons and outlines the control measures to reduce the impacts and risks to ALARP. The source control arrangements and control measures presented in the EP and Browse Regional OPEP apply global industry guidance to reduce the impacts from a loss of well control event to ALARP. The arrangements and control measures for unplanned discharges are supported with performance objectives and standards in the EP and the Browse Regional OPEP.
  - ii. The source control activities for a loss of well control event identify the possibility of dispersant use. Section 9.15 of the EP provides a description of the potential impacts of dispersants to the benthic communities in vicinity of the petroleum activity. I noted that the closest shallow water features to the OA are Goeree Shoal, Eugene McDermott Shoal and Vulcan Shoal, located 14 km, 20 km, and 24 km from the OA, respectively. While the activity is located within the dispersant application exclusion zone defined in the Browse Regional OPEP (Section 4.5.5), the EP demonstrates that, under certain environmental conditions and operational response circumstances, it may still be appropriate to use dispersants. The use of the dispersant may be critical to bringing a well back into control and thus reduce the overall extent, duration and severity of the spill incident. I considered that the EP defined an

appropriate process in which dispersant application, as a response option, will be strategically assessed to consider the net environment benefit gained and will only be selected if the success of the response option outweighs the environment impact.

55. Based on the findings above and those outlined below at [56] – [63], I was reasonably satisfied that the EP met the requirements of reg 10A(b).

**The EP demonstrates that the environmental impacts and risks of the activity will be of an acceptable level: regulation 10A(c)**

56. I considered that the EP demonstrated that the environmental impacts and risks of the activity will be of an acceptable level. Specifically, I found that:

- a. Section 9 of the EP applies a clear, systematic, and reproducible process for demonstrating how environmental risks will be of an acceptable level and the statements and conclusions drawn by the titleholder in the EP have been sufficiently supported with scientific literature. The process is commensurate with the nature and scale of the activity and the severity of its impacts and risks with more effort and rigour applied to evaluations where there is a higher degree of scientific uncertainty in predictions of impacts and risks and/or severity of potential consequence of impacts and risks.
- b. Section 8 of the EP describes the process undertaken by the titleholder to determine acceptable levels of impact and risk for the petroleum activity, including through consideration of the principles of ecologically sustainable development (**ESD**), internal context, external context and other requirements (e.g. national and international industry standards, laws and policies, plans for management and conservation advice, conventions and significant impact guidelines). The acceptable levels of impacts and risks to environmental receptors from the petroleum activities are summarised in Table 8-4;
- c. the EP demonstrates that the petroleum activity is not likely to have a significant impact on MNES protected under the EPBC Act, including World Heritage properties, National Heritage properties, *Ramsar* wetlands, listed threatened species and communities, listed migratory species, Commonwealth marine areas, and the Great Barrier Reef Marine Park;
- d. the EP includes appropriate and accurate content to demonstrate that the proposed activity is not inconsistent with relevant key documents such as recovery plans, conservation advice and management plans, which are outlined in Section 7.3.5. An assessment of the activity against the relevant objectives and action areas in these plans is provided throughout Section 9 of the EP to demonstrate that the activity is not inconsistent with key documents such as the Commonwealth Conservation Management Plan for the Blue Whale 2015–2025 made under section 269A of the EPBC Act, Guidance on Key Terms within the Blue Whale Conservation Management Plan (2021), Blue Whale Conservation Management Plan – FAQs published by NOPSEMA, and Marine Bioregional Plan for the North-west Marine Region and the Marine Bioregional Plan for the North Marine Region. For example, the noise evaluation (Section 9.5) demonstrated that the petroleum activity will be managed in a manner that is not inconsistent with the Conservation Management Plan for the Blue Whale and the Recovery Plan for Marine Turtles in Australia;
- e. In relation to planned aspects of the activity, predictions have been made regarding impacts and risks to the environment that are considered suitably conservative and result in the inclusion of appropriate controls given the nature of the activity. For example, the environmental assessment in Section 9 includes consideration of aspects typical for drilling activities, such as physical presence, lighting, noise, seabed disturbance, vessel movements, liquid effluent, drilling discharges, atmospheric and greenhouse gas emissions, waste management, and emergency events;

57. In relation to noise emissions, I considered that the EP demonstrated that this specific impact to threatened and migratory cetaceans will be of an acceptable level because:

- a. the OA does not overlap with any BIAs for threatened and migratory cetaceans. The closest BIA to the OA is the pygmy blue whale migration BIA, located 120 km from the OA. The EP demonstrates, based upon scientifically supported predictions for pygmy blue whales, that the likelihood of encountering blue whales in the area within which received noise levels may result in injury, and behavioural disturbance is low;
- b. the noise evaluation (Section 9.5) has been informed by contemporary peer-reviewed literature and internationally accepted impact evaluation thresholds;
- c. the acceptable level of impact for underwater noise on cetaceans is compared to the predicted level of impact, which is derived from comparing noise modelling studies with published studies on the distribution patterns of cetaceans, to demonstrate that the environmental impacts of the activity will be managed to an acceptable level;
- d. the EP evaluates the potential for permanent threshold shift (**PTS**) and temporary threshold shift (**TTS**) in hearing and behavioural disturbance to cetaceans, due to underwater noise exposure from the activity; and concludes that the residual impact consequence is minor, given the activity location and noise profile.
- e. the EP addresses impacts and risks from underwater noise to cetaceans, in particular blue whales. The EP explains that the predicted distances to PTS and TTS from modelling are based upon cumulative exposure for 24-hours by a stationary receptor, which is conservative given it is not a realistic scenario based on the predicted movement patterns of whales. The EP concludes that PTS and TTS are not expected to occur for whales transiting through the OA.
- f. the activity will not have an unacceptable level of impact on blue whale foraging because the OA is not located in a designated pygmy blue whale foraging area (as defined in the Blue Whale Conservation Management Plan);
- g. If greater than expected numbers of whales are observed in the area, the EP provides for adaptive management whereby the titleholder will initiate and follow its change and revision processes (which I consider in reg 10A(e) below);
- h. the EP describes a range of control measures to reduce underwater noise impacts to threatened and migratory cetaceans appropriate for the location of the activity, including, but not limited to:
  - i. Procedures for pile driving activities conducted for installation of the docking piles have been adapted from the 'Standard Management Procedures' set out in EPBC Act Policy Statement 2.1 – Interaction between Offshore Seismic Exploration and Whales: Industry Guidelines, specifically:
    - A. A suitable number of crew will be trained by an experienced Marine Fauna Observer (**MFO**) and be onboard the installation vessel before any piling will occur, such that at least one trained MFO will be on watch during the piling activity;
    - B. Pre-Start-up-Visual Observation - During daylight hours, visual observations (using binoculars and the naked eye from a high vantage point on the Vessel) for the presence of whales will be undertaken by a suitably trained crew member for at least 30 minutes before the commencement of piling activities;
    - C. Soft Start Procedure (also known as ramp-up) - The hammer piling will be initiated at the lowest striking force (where equipment allows), with a gradual ramp-up over a 30-minute period until the full striking power is reached;

- D. Operations Procedure – During daylight hours, trained crew should undertake visual observations continuously during the piling activity. Any break in piling greater than a 30-minute period will reinitiate the soft start requirement;
- E. Stop Work Procedure - If a whale is sighted within the 3 km observation zone an additional trained crew member should also be brought to the bridge to continuously monitor the whale whilst in sight. If a whale is sighted within or is about to enter the protection zone (1 km), the acoustic source should be powered down to the lowest possible setting (where equipment/operating procedure allows). If a whale is sighted or is about to enter the Shut-down zone (500 m), the acoustic source should be shut down completely. It is noted that for engineering purposes it may not be possible to shut-down or reduce striking power until the pile is in its final position. Power-up of the acoustic source with soft-start procedures should only occur after the whale has been observed to move outside the protection zone, or when 30 minutes have lapsed since the last whale sighting.
- F. Night-time and Low Visibility Procedures - Operations may proceed provided that there have not been 3 or more whale instigated power-down or shut-down situations during the preceding 24-hour period.

- i. the EP demonstrates that with the implementation of the proposed management measures, the petroleum activity is not expected to injure or result in biologically significant behavioural disturbance to cetaceans and is not inconsistent with relevant requirements, including the Blue Whale Conservation Management Plan.

58. In relation to drilling-related discharges, I considered that the EP demonstrated that this specific impact will be of an acceptable level because:

- a. the EP (Section 9.10) evaluated the impacts of drilling discharges (including drill cuttings, drill fluids, cementing fluids and cement, pit wash and oily water and drill bushings) on the marine environment. The impact evaluation has been informed by contemporary peer-review literature and dispersion modelling of drilling fluids and cuttings;
- b. modelling undertaken by the titleholder demonstrates that deposition of cuttings to the benthic environment (>1mm) will be within 658 m of the drilling location, noting that the closest submerged feature is the Goeree Shoal located 14 km from the OA. I noted that the Crux Project OPP included an EPO specifying that “No direct loss of coral communities (coral colony) at Goeree Shoal, will occur as a result of the Crux project”. The impact evaluation demonstrates that the activity will meet this EPO.
- c. appropriate consideration has been given to the *Minamata Convention on Mercury*<sup>1</sup> in relation to the management of sources that contain mercury (such as barite). I note that appropriate control measures have been adopted for contaminant limit concentrations in barite (<1 mg/kg of mercury dry weight). The EP also applies industry best practice in handling of excess bulk powders at activity completion, such that there will be no disposal of bulk barite to the marine environment at the end of the drilling activity. The titleholder will conduct analysis of cement and bentonite to confirm mercury free status, prior to any bulk discharge.
- d. The EP describes a range of control measures to reduce impacts of drilling-related discharges, including, but not limited to:
  - i. No planned discharge of whole SBM / Base Oil (bulk or used) to the marine environment will occur during development drilling;

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<sup>1</sup> *Minamata Convention on Mercury, signed 10 October 2013 [2022] ATS 7 (entered into force 7 March 2022)*

- ii. Use of SBM will be based on a documented justification process and only used where technically required;
  - iii. When using SBM, the solids control equipment will reduce the residual base fluid on cuttings content prior to discharge overboard. Residual SBM on cuttings will be less than 6.9% by weight (w/w), averaged over all well sections using SBM; and
  - iv. Discharge of SBM pit wash/oily water less than 1% oil in water;
- e. The EP demonstrates that with the implementation of the proposed management measures, drilling discharges will have a residual impact consequence of minor (Table 9-48), and therefore will be managed to an acceptable level.

59. In relation to impacts and risks to cultural features of the environment, I considered that the EP (Section 9) demonstrated that this will be of an acceptable level because:

- a. the EP adequately evaluates the potential for the petroleum activity to directly or indirectly affect First Nations cultural heritage features and values;
- b. the evaluation of impacts and risks to cultural features utilised multiple sources of relevant and suitable information, ranging from Native Title claims, determinations and ILUAs, IPAs, State/Territory and Commonwealth Marine Park Management Plans, publicly available databases on cultural heritage sites, published literature and supported through independent expert opinion and consultation with First Nations relevant persons; and
- c. the evaluation addresses the matters raised through First Nations relevant persons consultation. Where consultation with First Nations relevant persons has elicited additional information about cultural features of the environment, this has informed the titleholders evaluation, identification and selection of control measures for reducing impacts and risks to acceptable levels. For example, feedback provided from First Nations relevant persons regarding cultural heritage sites located along the coastline within the Planning Area has been incorporated into the EP (Section 7.4.2) and Browse Regional OPEP (Attachment 3: Strategic Spill Impact Mitigation Analysis (**SIMA**));
- d. the impact and risk evaluations (Section 9) outline that:
  - i. there are currently no underwater cultural heritage artefacts known within the OA that could be impacted by planned activities (Section 9.6). I noted that the petroleum activity will occur in water depths of approximately 170 m. While parts of the Planning Area make contact with coastal and island shorelines and a seabed environment that is, and was previously, occupied by First Nations people, the 125 m depth contour represents the furthest extent of historical human habitation (Section 7.4.1.3) and the deeper offshore waters where the activities will occur, were not inhabited, as they have always been submerged. Given this, there is limited potential for the presence of tangible First Nations underwater cultural heritage. Regardless, the titleholder will implement a chance find process for unknown tangible underwater cultural heritage artifacts (EPS #4.7);
  - ii. in the highly unlikely event of a Level 2 or 3 spill, there is potential for tangible and intangible cultural heritage features and values that are present within the Planning Area to be impacted. The SIMA process recognises aboriginal heritage including special places, cultural landscapes, practices and fishing/foraging along the Kimberley and NT coastline may be impacted by surface and weathered condensate above impact thresholds in the highly unlikely event of a well blowout in the Browse Basin. The effect of surface condensate on this receptor includes physically degrading a site, disrupting the harvesting of fish, and area closures that could displace Aboriginal people and have implications on cultural identity, health and wellbeing. The potential for recovery of this receptor is expected to be short to

medium term and the receptor is generally remote from any potential well blow-out location. The SIMA evaluates each response strategy effectiveness to protect cultural heritage sites and demonstrates the consequence would be considered Minor. The titleholder will implement its Browse Regional OPEP, in addition to notifying and obtaining advice from First Nations relevant persons on cultural features and values in the event of an oil pollution incident (Section 9.14.6.3); and

- iii. the activity will be managed to the defined acceptable level of impact for cultural heritage features and values, such that there are no impacts to cultural heritage features and no significant impacts to cultural heritage values (defined in Table 8-4); the EP demonstrates that with the implementation of the proposed management measures (as outlined in Section 9), that impacts and risks to cultural features of the environment will be managed to acceptable levels.

60. In relation to unplanned aspects of the activity (Section 9), I was satisfied that the EP gives appropriate consideration to risks, such as accidental release of hazardous and non-hazardous wastes, unplanned vessel movements, introduction of invasive marine species and emergency events (loss of well control and vessel collision). Uncertainty has been addressed in the evaluation of oil pollution incidents through the application of appropriately conservative stochastic modelling (including 50 km buffer for the identification of cultural features and values) and recognition of assumptions made, and the provision for scalability of spill response to address spills of different magnitudes has been considered. The evaluation of risks posed by spill scenarios includes consideration of potential impacts to the receptors outlined in the description of the environment (Section 7) and informs the selection of appropriate spill response options.

61. The EP provides an appropriate evaluation of impacts and risks specific for the nature and location of the activity and relevant environmental receptors. I considered that the evaluation is commensurate to the level of impact or risk presented and provides justifiable conclusions that impacts and risks will be managed to an acceptable level (Section 9). The impact and risk evaluations demonstrate that the acceptable level will be met, and that the EPO will be achieved.

62. Information provided during relevant persons consultation is appropriately considered, evaluated, and incorporated into the EP. The titleholder has considered information gathered from the consultation process when demonstrating impacts and risks will be managed to an acceptable level. For example, through consultation with First Nations relevant persons, the Northern Land Council (NLC) were interested in being notified in the event of a spill (Table 5-12). This was addressed by the inclusion of a notification requirement to NLC in the event of a Level 2 or 3 spill (Table 10-5). Additional examples of this type can be found in my reasons at paragraphs [119] and [128].

63. Based on the findings above, I was satisfied that the EP met the requirements of reg 10A(c).

**The EP provides for appropriate environmental performance outcomes, environmental performance standards, and measurement criteria: regulation 10A(d)**

64. Section 9 of the EP contains the EPOs, EPSs and measurement criteria for impacts and risks of the petroleum activity.

65. The EP provides appropriate EPOs that I considered:

- a. are relevant to identified environmental impacts and risks for the petroleum activity;
- b. when read in conjunction with associated EPSs, establish measurable levels for management of environmental aspects of the petroleum activity;

- c. when read in conjunction with the relevant environmental impact/risk evaluation and adopted management measures, demonstrate that the environmental impacts and risks will be managed to an acceptable level; and
  - d. are considered consistent with the principles of ESD and relevant requirements (such as Recovery Plans, plans of management and other statutory instruments, considering items a-c above).
66. The EP provides appropriate EPSs that:
- a. contains clear and unambiguous statements of environmental performance. The statements of environmental performance describe how each of the adopted control measures will function and perform to effectively reduce environmental impacts and risks to ALARP and to an acceptable level;
  - b. have clear measurement criteria that link to the EPSs and will provide a record that the EPSs have been met. The measurement criteria are suitable for verifying that the defined levels of environmental performance are being met, and for the purpose of monitoring compliance.
67. I considered that the EPOs, EPSs and measurement criteria are clearly linked and complementary of one another.
68. The EP and Browse Regional OPEP contain EPOs, EPSs and measurement criteria for response preparedness and implementation. These are provided for the proposed response strategies outlined in the Browse Regional OPEP.
69. Based on the findings above, I was reasonably satisfied that the EP met the requirements of reg 10A(d).
- The EP includes an appropriate implementation strategy and monitoring, recording and reporting arrangements: regulation 10A(e)**
70. Reg 10A(e) requires that I be satisfied that the implementation strategy, and the monitoring, recording and reporting arrangements were appropriate.
71. I noted that the implementation strategy outlined in Section 10 provides a range of systems, practices and processes (outlined in further detail below) which I was satisfied provided for all impacts and risks to continue to be managed to ALARP and acceptable levels for the duration of the activity.
72. I was satisfied that the management of change (**MOC**) process was adequately described in Section 10.1.3 and was appropriate because:
- a. management of changes relevant to the scope of the activity, will be managed in accordance with reg 39;
  - b. the titleholder has established internal management of change procedures that it will follow when assessing changes to the activity. The procedure determines whether a revision of the EP is required and whether that revision is to be submitted to NOPSEMA for consideration;
  - c. changes will be risk assessed to determine the significance of any potential new environmental impacts or risks not provided for in the EP; and
  - d. Section 10.1.3 provides a reasonable description of the titleholders' learning and knowledge sharing processes.
73. Section 4 of the EP describes the titleholder's environmental management system, the 'Shell Health, Security, Safety, Environment and Social Performance Management System'. I was satisfied that this was appropriate as the system provides a structured framework that set common expectations governing how all employees and contractors will work. The management system consists of the elements: leadership and commitment; policy and objectives; organisation, responsibility and resources, standard

and documents; risk management, planning and procedures; implementation, monitoring and reporting; assurance; and management review (Section 4.4)

74. I was satisfied that the EP (Section 10.3) included appropriate training and competency requirements relevant to the EP with all personnel employed for the activity, required to be competent to perform assigned positions. The Browse Regional OPEP outlines additional training and competency requirements for relevant personnel specific to spill response. Inductions will be provided to all personnel employed for the activity. The induction covers the HSE requirements legislative requirements, key environmental aspects, impacts and risks associated with the activity and key EP commitments and environmental management requirements. Overall, appropriate commitment is made to training to ensure that all employees and contractors have suitable competencies.
75. The key roles and responsibilities of personnel involved in the implementation, management and review of the EP are appropriately outlined in Section 10.2 and the roles and responsibilities for personnel involved in oil spill preparation and response are outlined in Section 10.7.8 of the EP (and in the Browse Regional OPEP).
76. An appropriate OPEP has been provided that includes arrangements that are suitable, given the spill scenarios presented, and addresses each of the EP content requirements in reg 22. Specifically:
- a. the Browse Regional OPEP details the oil pollution response control measures that will be used to reduce the impacts and risks of the activity to ALARP and an acceptable level, the arrangements for responding to and monitoring oil pollution to inform response activities, the arrangements for updating and testing the oil pollution response arrangements and control measures, and provides for the monitoring of impacts to the environment from oil pollution and response activities; and
  - b. the Browse Regional OPEP contains immediate (first strike) response measures that provides the oil pollution arrangements and control measures in an operational deployment context.
77. I found that monitoring, recording and reporting arrangements are adequately described in Section 10.4.1 and 10.5 and included routine internal and external reporting requirements and incident reporting arrangements. I considered that these arrangements were appropriate as these sections detailed that the information collected will:
- a. be based on the EPOs, controls, standards and measurement criteria in the EP; and
  - b. include environmental discharges reports that record volumes of planned and unplanned discharges to marine environment and atmosphere.
78. The EP also provides for appropriate auditing, review and management of non-conformances of the titleholder's environmental performance and the implementation strategy in Section 10.4.3 and 10.4.4. Non-conformances are entered into an incident management system and assigned corrective and preventative actions that are monitored and tracked to close out.
79. The EP provides for the implementation of ongoing consultation arrangements in Section 5.8, with planned notifications to relevant persons outlined in Section 10.5.4. I considered that these arrangements were appropriate because the titleholder has committed to:
- a. complete the Underwater Cultural Heritage Survey and consult with First Nations relevant persons in relation to the survey outcomes on an ongoing basis where they chose to voluntarily participate;
  - b. establish industry collaboration on the involvement of First Nations people in oil spill preparedness, with ongoing engagement planned primarily with Bardi-Jawi people;
  - c. social investment and community contribution programs with numerous relevant persons;



- d. carry out ongoing consultations with various First Nations groups and people in the Kimberly, adjacent to the Planning Area for the Crux Project, outside of this activity scope, to better understand cultural features and values of the environment;
- e. notify particular First Nations relevant persons which have identified cultural features and values in the Planning Area in the unlikely event of a major spill;
- f. carry out ongoing consultation with DCCEE's Underwater Cultural Heritage Team during the execution of the activity, in the event that unforeseen potential impacts to underwater heritage are established;
- g. continuing to accept, assess and respond to post acceptance consultation feedback during the life of the EP (Section 5).

80. In light of the findings above, I considered the ongoing consultation arrangements described in the EP, as required by reg 14(9), are appropriate.

81. Based on the findings above, I was satisfied that the EP met the requirements of reg 10A(e).

**The EP does not involve the activity, or part of the activity, other than arrangement for environmental monitoring or for responding to an emergency, being undertaken in any part of a declared World Heritage Property within the meaning of the EPBC Act: regulation 10A(f)**

82. As I stated above at [24] I was satisfied that the EP clearly describes the boundaries of the petroleum activity (Section 6), which demonstrates that no part of the activity will be undertaken in any part of a World Heritage Property within the meaning of the EPBC Act.

83. In those circumstances, I am satisfied that the EP met the requirements of reg 10A(f).

**The EP demonstrates that the titleholder has carried out the consultations required by Division 2.2A, and the measures (if any) that are adopted because of the consultations are appropriate: regulation 10A(g)**

84. Reg 10A(g) has two components which the EP must demonstrate:

- a. first, that consultation has occurred as per the requirements in reg 11A of the 2009 Environment Regulations. Reg 11A requires that the titleholder consults with each 'relevant person' as defined in reg 11A(1), and imposes certain requirements for how that consultation is to occur (as specified in regs 11A(2)-(4)) (subparagraph (i)); and
- b. second, that the titleholder adopted, or proposed to adopt, appropriate measures in light of those consultations (subparagraph (ii)).

85. The Act and Regulations do not define what constitutes 'consultation' for the purposes of reg 11A (and therefore satisfaction of reg 10A(g)(i)). However, there must first be identification of the relevant persons to be consulted, followed by consultation, the purpose of which is to ensure that the titleholder has ascertained, understood and addressed all the environmental impacts and risks that might arise from its proposed activity.

86. Whether the steps and actions taken by a titleholder amount to 'consultation' will vary depending upon the particular circumstances and must reflect the characteristics of the relevant persons affected by the titleholder's proposed activity. However, consultation does not require every opportunity to be afforded. It also does not mean that, where those being consulted do not consider they have been properly consulted, 'consultation' has not been carried out. Overall, I must be reasonably satisfied that consultation undertaken was appropriate and adapted to the nature of the relevant persons, and that reasonable opportunity to participate in the preparation of the EP was given.

87. NOPSEMA received a number of direct communications from relevant persons raising issues and/or expressing concerns with and objections to the EP. Where those communications raised the same issues, concerns and objections as were raised during the consultation with the titleholder, these are addressed in my reasons below regarding whether reg 10A (g) is met. Where the direct communications raised objections or concerns that were not a relevant consideration for the EP assessment, I did not have regard to these.
88. In determining whether the consultation requirements set by reg 10A(g) have been met, I had regard to the content of the EP. In particular the titleholders report on consultation in Section 5, Appendix A and the sensitive information part of the EP.
89. I found that Section 5 of the EP provides descriptions of the consultation process and the rationale used to determine who and how to consult with relevant persons, including the approach to provision of sufficient information to allow the relevant person to make an informed assessment of the possible consequences of the activity on the functions, interests or activities of the relevant person and to allow the relevant person a reasonable period of time to engage in the consultation process.
90. Section 5.5 of the EP describes a clear process for the identification and broad capture of relevant persons in accordance with reg 11A(1). I considered that the process was appropriate as it:
- a. provides for the identification of all the categories of relevant persons as defined by regs 11A(1)(a)-(e) (Section 5.5.3);
  - b. has taken into account relevant case law relating to titleholder obligations for consultation with relevant persons for the purposes of reg 11A (Section 5.3.1);
  - c. includes consideration of multiple sources of appropriate information such as publicly available materials, review of databases and registers, published guidance, previous consultation history, as well as advice from authorities and other relevant persons (Sections 5.1-5.5);
  - d. provides details of the titleholder's approach to identifying relevant persons outside Australia in a manner proportionate to the potential for any effect on the functions, interests or activities, including international persons or organisations (Section 5.5.2.9);
  - e. includes details and evidence of reasonable steps taken by the titleholder to create awareness of the petroleum activity and the consultation process to ascertain relevant persons who the titleholder may otherwise not be aware of (Section 5.5 and Appendix A). For example, a broad capture of relevant persons was augmented by the titleholder through:
    - i. publishing information relating to the proposed activity and inviting participation in the relevant persons consultation process on the titleholder's public facing website (available from March 2023) that included an online self-nomination form for potentially relevant persons to complete; as well as a full copy of the draft EP (which was available from May 2023);
    - ii. publishing information relating to the proposed activity and inviting participation in the relevant persons consultation process within newspapers, local radio and social media advertisements and notifications that targeted regional locations across the geographic extent of the entire Planning Area (between March and April 2023);
    - iii. hosting various community sessions and forums that involved sharing information about the proposed activity and inviting participation in the relevant persons consultation process at targeted regional locations across the geographic spread of the Planning Area (i.e. drop-in

sessions were held at Broome, Darwin, Exmouth, Port Headland and Derby between March and May 2023, and community briefing sessions were held at Broome and Darwin between April and May 2023);

- iv. contacting First Nations representative bodies (including Land Councils, Prescribed Body Corporates, Native Title Representative Bodies, Registered Native Title Bodies Corporate, Aboriginal Land Trusts and Aboriginal Corporations) across the extent of the Planning Area and adjacent coastline (refer to Table 5.6); and
- v. asking already identified relevant persons via email, including those noted above, whether they were aware of any other persons or organisations that they should contact. I note that there were some cases where other persons or organisations were identified by relevant persons, and that the titleholder followed-up with each of those persons or organisations to afford an opportunity to participate in consultation.

- f. includes details of how the titleholder made an assessment to determine whether an individual or organisation who has self-identified as a relevant person, is or is not, considered to be a relevant person for the purposes of reg 11A (Section 5.5). I note that there were various persons or organisations that self-identified, which gave me confidence that the consultation process provided an effective means to ascertain relevant persons who the titleholder may otherwise not be aware of.

91. Table 5.6 in the EP provides clear details of who was identified as a relevant person following implementation of the identification process, including the category each relevant person falls within as defined in regs 11A(1)(a)-(e) and the rationale the titleholder has used to determine who they consider falls within those definitions.

92. I considered that the nature of the activity, description of the environment and the possible impacts and risks of the activity have been appropriately taken into account by the titleholder in determining whether the activity may be relevant to authorities, or determining whose functions, interests and activities may be affected. This is because:

- a. the titleholder has considered the nature and scale of the activity and the possible planned and unplanned impacts and risks of the activity when determining relevant persons; and
- b. the titleholder has considered all of the known environmental values and sensitivities within the geographic spread of the Planning Area. For example, while most planned impacts are confined to offshore locations in the order of 160 km from the nearest coastline of the mainland (i.e. northwest of Western Australia) and 105 km from the nearest offshore island (i.e. Cartier Island), the titleholder has conservatively applied oil pollution risk modelling to the identification of relevant persons within the area that may be affected by an unlikely spill event (the Planning Area).

93. I considered that the titleholder's approach to the provision of sufficient information allowed the relevant persons to make informed assessments of the possible consequences of the activity on their functions, interests or activities and a reasonable period for the consultation was provided. I formed this view because:

- a. the EP includes a description of the approach to provision of sufficient information (Section 5.6.1);
- b. the titleholder's approach to the provision of sufficient information considered the functions, interests and activities of the relevant persons and the nature and scale of environmental impacts and risks that affect them (Section 5.6.1.2);

- c. the titleholder sufficiently informed relevant persons of the purpose of consultation, including advising relevant persons of the regulatory requirements for consultation. For example, relevant persons were provided with the NOPSEMA brochure 'Consultation on offshore petroleum environment plans: Information for the community';
  - d. the consultation provided sufficient information about the environment and potential impacts and risks to allow relevant persons to make an informed assessment of the possible consequences of the activity on their functions, interests or activities. For example, all relevant persons were provided with consultation materials comprising an overview of the activity, a location map, details of the values and sensitivities in the environment that may be affected by the activity, a summary of the environmental impacts and risks associated with the activity, and a summary of the risk mitigation and management control measures;
  - e. the consultation provided relevant persons with the opportunity to provide input and engage in a genuine two-way dialogue. I noted that offers were made to meet and discuss with relevant persons, that there were meetings, phone calls and emails exchanged between the titleholder and numerous relevant persons in relation to consultation, and that the titleholder responded to requests for information and answered questions raised in an iterative manner;
  - f. the titleholder provided information in a form that is readily accessible and appropriate for the relevant person being consulted. Further, the titleholder used different materials to support the provision of information that was suited to the relevant person being consulted, such as (but not necessarily limited to) fact sheets, presentations, verbal briefings, pictorials, graphics, videos and maps. For example, commercial fishing licence holders and representative bodies received additional information relevant to their fishery (Appendix A); and
  - g. the titleholder has considered relevant persons' views of what constitutes sufficient information and provided relevant persons with additional information when requested.
94. I also considered that a reasonable period for the consultation was provided to relevant persons by the titleholder. I formed this view because:
- a. the EP describes the approach taken to determining a reasonable period for consultation that is based on case-by-case consideration of the relevant person's particular circumstances and includes consideration of the nature, scale and complexity of the activity (Section 5.6.2);
  - b. the process for relevant persons consultation provided for the titleholder to take into account any availability and accessibility issues of relevant persons;
  - c. relevant persons were initially provided with 30 days to respond; however, consultations continued with relevant persons after this period and up until the submission of the accepted EP to NOPSEMA on 10 November 2023. I also noted that the titleholder was proactive in sending reminders to relevant persons (via email and/or phone call) about impending dates for providing any response. For example, the titleholder provided relevant persons with consultation materials between March and May 2023 and followed up at least one or more times over a period of six months between May and October 2023 to allow reasonable opportunity to respond;
  - d. the titleholder considered requests for additional time for consultation by relevant persons, with requests for additional time facilitated where reasonably practicable. For example, the titleholder accommodated meeting and/or additional information requests made by various First Nations relevant persons, including when these requests were made beyond the initial 30 day response period as detailed in the EP. I noted that in some cases the requests for additional time for consultation meetings was not accommodated and have set out my consideration of this matter at [115] below; and

- e. the consultation process for this EP initially commenced in March 2023 and continued throughout the course of preparing the EP, with consultation materials made available to all relevant persons between March and May 2023, providing a reasonable period for relevant persons to consider the information provided, to make requests for additional information, and to provide the titleholder with an informed response. Within that time, it appears from the consultation records presented in the EP that comprehensive efforts were made by the titleholder to engage with and consult all relevant persons specifically in relation to the activity. I noted that the consultation process provided various opportunities since March 2023 for relevant persons to be identified or to self-identify and engage in the consultation process as detailed at [90.e] above. Further, I note that the judicial commentary in the Tipakalippa proceedings supports the proposition that the consultation process must be capable of being discharged within a reasonable time.
95. Having considered the detailed description of the consultation process in the EP, for reasons set out in [89] – [94] above, I consider that the approach adopted by the titleholder for identifying relevant persons was appropriate. I also considered that the titleholder's consultation methodology has provided sufficient information for relevant persons to participate in informed consultation, along with a reasonable period of time for the consultations to occur. I note that the Federal Court stated in *Santos NA Barossa Pty Ltd v Tipakalippa* [2022] FCAFC 193 that the consultation process must be capable of being discharged within a reasonable time and I consider that the EP demonstrates the titleholder provided multiple opportunities over a reasonable period of time for relevant persons to engage in consultation and responded to requests for information or other requests in a reasonable manner. My more detailed reasons on this issue are set out below.

#### **Relevant Persons under Regulation 11A(1)(a)-(c)**

96. Relevant persons under reg 11A(1)(a)-(c) are each Commonwealth, State or Northern Territory Department or agency to whom the activity in the EP may be relevant, in addition to the Department of each responsible State Minister or Northern Territory Minister.
97. Section 5.5.3.2 of the EP of the EP outlines the process for the identification of Commonwealth and State and Territory Departments and/or agencies in the marine, environment and industry fields, which I considered to be appropriate. Table 5.6 the EP provides the titleholder's assessment of the 26 Commonwealth, State and Northern Territory Departments and agencies that are considered to be a relevant person under reg 11A(1)(a)-(c).
98. I noted that consultation with the relevant persons under reg 11A(1)(a)-(c) occurred, in accordance with GL1887 – Consultation with Commonwealth agencies with responsibilities in the marine area – January 2023, predominately via email, unless otherwise requested. The relevant persons under reg 11A(1)(a)-(c) were also invited to an industry briefing held at the titleholder's offices in Perth on 27 April 2023 with a Teams link as dial-in to hear directly from the titleholder and ask questions in relation to the Crux Project activities that includes the drilling activity which is the subject of this EP.
99. I considered that sufficient information was provided to allow the relevant persons under reg 11A(1)(a)-(c) to make an informed assessment of the possible consequences of the activity on the functions, interests or activities. In particular, the titleholder provided a link to the titleholder's website that contained online materials and information relevant to the functions, interests or activities of these relevant persons. The online materials and information on the website ranged from background information about the Crux Project generally through to more detailed activity specific information, including an overview of the activity, the environment that may be affected, potential environmental impacts and risks and proposed control measures. It also included various documents for relevant

persons to access such as an activity-specific factsheet, the draft EP (which was made available from 3 May 2023), and NOPSEMA's 'Consultation on offshore petroleum environment plans' brochure.

100. The titleholder initially contacted and commenced consultation with relevant persons under reg 11A(1)(a)-(c) between March and May 2023. Relevant persons were initially provided with 30 days to respond, and consultations continued with relevant persons where requested. I considered that relevant persons under reg 11A(1)(a)-(c) were provided with a reasonable period for the consultation.
101. I noted the consultation records in the EP show that the titleholder provided information to relevant persons under reg 11A(1)(a)-(c) regarding the titleholder's consultation obligations and that under reg 11A(4) that relevant persons may request that particular information the relevant person provides in the consultation not be published. I also noted that no such requests were made by relevant persons under reg 11A(1)(a)-(c).
102. For reasons set out in [97] – [101] above, I was, accordingly, reasonably satisfied that reg 10A(g)(i) was met.
103. Finally, I noted that most relevant persons under reg 11A(1)(a)-(c) that responded to the consultation did not make any objections or claims relating to adverse effects of the activity in response to the consultation requests. Where there were objections or claims raised by a relevant person under reg 11A(1)(a)-(c), the EP demonstrates that the titleholder assessed the merit of each objection or claim, and determined whether or not additional measures were required in response. I also noted that some relevant persons under reg 11A(1)(a)-(c) provided feedback during consultation which was not related to an adverse impact of the activity, and found that in any case, the titleholder identified the feedback and indicated what changes were made to the EP in response. For example, a large part of the feedback was that certain bodies should be provided with certain notifications from the titleholder (e.g., activity commencement and duration notifications), all of which have been included as commitments in the EP (e.g., refer to Table 10.5). I considered that these measures were appropriate, and therefore reg 10A(g)(ii) was met.

#### ***Relevant Persons under Regulation 11A(1)(d)***

104. Relevant persons under reg 11A(1)(d) are considered to be 'a person or organisation whose functions, interests or activities may be affected by the activities to be carried out under the EP, or the revision of the environment plan.'
105. Section 5.5.3.2 of the EP outlines the process for the identification of persons and organisations whose functions, interests or activities may be affected by the activities to be carried out under the EP, which I considered to be appropriate, as per my reasons above. Table 5.6 of the EP provides the titleholder's assessment of the 415 persons or organisations that are considered to be a relevant person under reg 11A(1)(d), within the broad categories of "commercial fisheries" (49), "titleholders and operators" (36), "commercial operators" (145), "interest groups" (17), "non-government organisations" (31), "academic and research" (8), "industry representative bodies" (7), "service providers" (15), "local councils" (14), and "Indigenous organisations and people" (93). A description of the functions, interests or activities of those persons or organisations identified as relevant persons under reg 11A(1)(d) is also provided in Table 5.6.
106. I noted that Table 5.3 of the EP includes appropriate definitions for the terms of "functions", "interests" and "activities" that are consistent with the definitions provided for those terms in NOPSEMA's 'Consultation in the course of preparing an environment plan guideline'. I considered the interpretation and application of the terms to appropriately promote the objects of the Regulations,

including that offshore petroleum and greenhouse gas activities are carried out in a manner consistent with the principles of ESD.

107. I will first explain my conclusions on the titleholder's consultations with First Nations relevant persons (i.e., those defined in the EP under the category of "Indigenous organisations and people"), and then my conclusions on the other relevant person categories under reg 11A(d) identified at [105] above.

First Nations 'relevant persons'

108. I considered that the titleholder's methodology, as identified in the EP, is consistent with the purpose and intention behind reg 11A, NOPSEMA's guideline on Consultation in the course of preparing an environment plan (12 May 2023), and recent Federal Court authority on the interpretation of this provision, such as *Santos NA Barossa Pty Ltd v Tipakalippa [2022]* FCAFC 193 namely, to ensure that the titleholder had 'ascertained, understood and addressed all the environmental impacts and risks that might arise from its proposed activity'.

109. I was reasonably satisfied that the consultation process provided for broad capture of ascertainable First Nations persons and organisations who may have their functions, interests or activities affected because:

- a. the identification of First Nations relevant persons has been informed appropriately by the operational aspects of the activity and the associated impacts and risks, including the highly unlikely scenario of an oil pollution incident, which has been evaluated without implementation of mitigation strategies that would be implemented to reduce the volume, duration and extent of any oil pollution incident. The titleholder has also conservatively utilised the Planning Area (i.e., the area that may be affected by potential emergency conditions in the event of an oil pollution incident) with a further 50 km buffer distance applied as the geographical boundary for the purposes of identifying First Nations relevant persons. I noted that the titleholder's process included criteria for identifying First Nations relevant persons based on the Planning Area overlapping or being in the vicinity of the following: native title claims pending or determined, ILUAs, recognised sacred sites, Indigenous Protected Areas (IPAs), or other land rights that extend offshore;
- b. the titleholder's process appropriately identifies First Nations representative bodies under the *Native Title Act 1993* and the *Aboriginal Land Rights (NT) Act 1976*. Accordingly, the titleholder identified a number of First Nations representative bodies as relevant persons, who were consulted in their own right, and encouraged to advise of other First Nations groups or individuals with whom the titleholder should consult. I noted that all additional relevant persons identified by the First Nations representative bodies were afforded an opportunity to be consulted by the titleholder;
- c. additionally, the titleholder's consultation process included steps to generate public awareness of the activity over a period of approximately seven months for First Nations persons or organisation to respond to broad reaching public notices and advertisements as detailed at [90.e] above. I noted that there were four First Nations persons or organisations that self-identified, which provided confidence that the process was effective in being able to ascertain relevant persons who the titleholder may otherwise not be aware of, and that each of those self-identified First Nations persons or organisations were consulted as relevant persons (under regulation 11A(1)(e)); and
- d. while I recognised there were limitations to each of the individual enquiry methods, the combination of approaches implemented, when considered holistically, reasonably provided for First Nations people and organisations with functions, interests or activities that may be affected by the activity to be identified and consulted as a relevant person in a manner proportionate to the potential adverse impact.

110. First Nations relevant persons that were identified as relevant persons under reg 11A(1)(d) in the EP included Land Councils, Aboriginal Land Trusts, Native Title Representative Bodies (**NTRBs**), Registered Native Title Bodies Corporates (**RNTBCs**), Prescribed Body Corporates (**PBCs**), Aboriginal Corporations, Land and Sea Management Groups, Aboriginal Arts and Cultural centres, Native Title Claim groups, Advisory Committees and individual indigenous persons.
111. I noted that the titleholder tailored their approach to consultation with First Nations relevant persons, including how the information was given to allow the “relevant person” to assess the possible consequence of the proposed activities on their functions, interests or activities (Section 5.6.5). For example, by seeking specific advice from NTRBs on consulting and obtaining appropriate contact details to consult with certain RNTBCs, prioritising face to face meetings where possible, prioritising phone call contact with known leaders of different Indigenous groups to establish rapport and relationship where contact details are freely available, offering to meet at a time and location of choice with people identified by them as appropriate, and holding meetings that followed a format and approach determined and agreed by both parties (Indigenous organisation/person and Shell).
112. I noted that the titleholder categorised each First Nations relevant person into four different categories of tiers (i.e. Tiers 0-4) that were reasonably based on the extent to which First Nations relevant persons may consider themselves responsible for cultural and spiritual care of land and sea, and the degree to which their functions, interests or activities are anticipated to be affected by the proposed activity based on their locations relative to the OA and Planning Area. This approach resulted in the following categorisations of First Nations relevant persons:
- a. Tier 0 (includes PBCs, NTRBs or RNTBCs that may be affected by the planned impacts of the activity directly within the OA) – there were no First Nations relevant persons assigned to this tier;
  - b. Tier 1 (includes PBCs, NTRBs or RNTBCs and Aboriginal Corporations assigned under the authority of an RNTBC located within 400 km of the OA where planned impacts of the activity are considered unlikely to extend beyond) – there were nine First Nations relevant persons assigned to this tier (of which are located >140 km away from the OA);
  - c. Tier 2 (includes PBCs, NTRBs or RNTBCs and Aboriginal Corporations located within or coastally adjacent to the Planning Area) – there were 21 First Nations relevant persons assigned to this tier; and
  - d. Tier 3 (includes PBCs, NTRBs or RNTBCs and all other Indigenous people or organisations at the periphery of the Planning Area) – there were 67 First Nations relevant persons assigned to this tier.
113. I noted that Table 5-8 includes details of how the consultation approach with First Nations relevant persons varied based on the assignment of tiers. This involved scaling and prioritising consultation efforts with First Nations relevant persons assigned to the higher tiers in contrast to the lower tiers (e.g., greater efforts were applied for Tiers 1 and 2 in contrast to Tier 3). I considered that this approach was appropriate, noting the method also detailed in Section 5.6.3 of the EP that, regardless of which tier a First Nations relevant person was placed in, the titleholder’s overarching approach was to be collaborative and responsive in consultation, taking on First Nations relevant persons’ feedback about the method of consulting. When I considered the titleholder’s consultations with First Nations relevant persons (Section 5.6.5 of the EP), I found that this approach had been followed by the titleholder and the consultation was adapted based on feedback that was received by the titleholder where reasonably practicable (see also my reasons at [114]).



114. In relation to the titleholders' consultations with First Nations relevant persons, I considered the titleholders report on consultation in Section 5, Appendix A and the sensitive information part of the EP. I was reasonably satisfied that the consultations required by Division 2.2A have been carried out with each of these relevant persons because:

- a. the methods applied to consultation with these relevant persons were appropriate and reasonably adapted to the nature of the interests of these relevant persons. In particular:
  - i. the titleholder approach to consultation with First Nations relevant persons was flexible and adaptive, such that the consultation was undertaken, to the extent it was reasonably practicable, according to feedback and guidance from First Nations relevant persons. For example, the titleholder's initial invitation to First Nations relevant persons for consultation typically included a request for feedback on their preferred method of engagement (including an offer to meet at a time and location of choice including on-country). When a First Nations relevant person expressed interest in engaging in the consultation process and provided feedback on their preferred method for the consultation to occur in a culturally appropriate manner, the titleholder accepted that feedback and adapted their approach to engaging with them based on their preferred method as far as reasonably practicable. In many cases, this resulted in the titleholder attending face-to-face meetings with First Nations relevant persons at a location of their choice, to provide additional verbal briefings and/or presentations supported with information in pictorial or graphic form. I note that there were some cases where the titleholder was unable to accommodate each and every request made by First Nations relevant persons, which I consider further at [115] below;
  - ii. I noted that the process considered availability and accessibility issues of First Nations relevant persons where the EP demonstrates that the titleholder made provision for and did undertake travel to regional locations to meet with various First Nations relevant persons. For example, the titleholder held Indigenous Forums in regional locations such as Broome and Darwin on 10 May 2023 and 31 May 2023, respectively. In addition, the titleholder travelled to Broome to meet the Board of Nyamba Buru Yawuru Aboriginal Corporation on 18 May 2023, to the Tiwi Islands to meet with the Tiwi Land Council on 26 May 2023, to Broome to attend a joint meeting with representatives of Walalakoo Aboriginal Corporation, Mayala Inninalang Aboriginal Corporation and Bardi Jawi Niimidiman Aboriginal Corporation on 15 August 2023, to Port Headland to meet with the Board of Wanparta Aboriginal Corporation on 16 August 2023, and to Exmouth to meet with the Board of Nganhurra Thanardi Garrbu Aboriginal Corporation on 24 October 2023; and
  - iii. the purpose of the consultation and the opportunity being afforded was communicated by the titleholder to First Nations relevant persons using clear and simple language that was aligned with the intent of consultation under reg 11A. For example, the titleholder clearly set out the purpose of consultation within emails to First Nations relevant persons, and the EP indicates that First Nations relevant persons were also provided with the NOPSEMA brochure 'Consultation on offshore petroleum environment plans: Information for the community' which sets out the regulatory requirements for consultation.
- b. the titleholder provided sufficient information to these relevant persons to allow them to make an informed assessment of possible consequences of the activity on their functions, interests or activities. In particular:
  - i. the titleholder provided First Nations relevant persons with sufficient information in a readily accessible form and format. For example, First Nations relevant persons were provided with an activity-specific fact sheet, a link to a webpage with Crux Project information, and a link to a webpage containing the draft EP for the activity. The full text consultation records in the

sensitive information part of the EP also demonstrates that there were many cases where the titleholder exchanged emails with First Nations relevant persons that included offers for additional information to be provided if required;

- ii. additional information was provided iteratively, and consultation was adapted in response to the feedback received from First Nations relevant persons to allow them to make an informed assessment of the possible consequences of the proposed activity on their functions, interests, or activities. For example, in circumstances where a First Nations relevant person requested additional information, the full text consultation records in the sensitive information part of the EP demonstrates that these requests were met. Further, in circumstances where a First Nations relevant person raised queries, objections or claims regarding the activity during the consultation process, the full text consultation records in the sensitive information part of the EP demonstrate that the titleholder provided responses to the queries, objections or claims;
  - iii. accurate and comprehensive information was provided to First Nations relevant persons about the activity that was relevant and necessary to allow an informed assessment. For example, the information provided to First Nations relevant persons included clear details regarding the nature of the activity (e.g. location, timing, types of equipment etc.), the planned and unplanned environmental impacts and risks associated with the activity, the extent of the environment that may be affected by all environmental impacts and risks of the activity, the environmental values and sensitivities known to occur within the environment that may be affected by the activity, and the control measures that are proposed to be implemented by the titleholder to manage environmental impacts and risks to ALARP and acceptable levels;
  - iv. further, I noted that the titleholder established a panel of four suitably qualified and experienced environmental subject matter experts (three of which were from reputable consultancies independent of the titleholder), and made this panel available to all First Nations relevant persons for advice and support if desired (with associated costs to be covered by the titleholder). The panel was present at the Indigenous Forums for attendees to engage with in person, and the contact details of each panel member (i.e., phone numbers and emails) were provided at the Indigenous Forums, via emails to all First Nations relevant persons, and during meetings where these occurred with some First Nations relevant persons; and
  - v. I also noted that all First Nations relevant persons were invited to attend Indigenous Forums that were hosted by the titleholder in April and May 2023 and included three sessions held in Perth, Broome and Darwin. These Indigenous Forums were designed with input by First Nations people, included travel and accommodation support, and afforded opportunities for First Nations relevant persons to become informed about the proposed activity, questions and raise feedback or concerns to the titleholder and environment subject matter expert panel that also attended. A video recording of the first indigenous Forum held in Perth was also circulated to First Nations relevant persons.
- c. the titleholder allowed a reasonable period for the consultation with these relevant persons. In particular:
- i. consultation with First Nations relevant persons occurred over a period of approximately six to seven months (i.e., since March or April 2023);
  - ii. within the consultation period, the EP demonstrates that a substantial amount of effort was applied by the titleholder to afford opportunities to First Nations relevant persons to share

information and engage in two-way dialogue for the purposes of consultation under reg 11A. For example, there was an iterative process of information provision and various opportunities to provide feedback in writing or verbally at meetings. In circumstances where a First Nations relevant person was not responsive during the consultation process, the EP demonstrates that the titleholder made reasonable efforts to continue to engage with them to understand how their functions, interests or activities may be affected. In particular, consultation records in the EP (including in the sensitive information part) show that the titleholder attempted to follow up with these relevant persons on at least one or more occasions, using at least one or more communication methods (e.g. phone calls, emails and/or face to face meeting attempts) and over a reasonable period (e.g. multiple months);

- iii. the EP also demonstrates that all First Nations relevant persons had numerous opportunities to identify First Nations cultural features and heritage values in the environment that may be affected by the activity and provide feedback on the proposed approach to managing the activity, so that potential environmental impacts and risks on those features and values will be reduced to ALARP and acceptable levels. For example, the consultation details within the EP (including in the sensitive information part) show that genuine attempts were made by the titleholder to understand the First Nations cultural features and heritage values that First Nations relevant persons may have in the environment that may be affected by the activity. All First Nations cultural features and heritage values identified by First Nations relevant persons have been appropriately incorporated into the EP, to demonstrate how potential environmental impacts and risks on these features and values will be reduced to ALARP and acceptable levels (see my reasons at [119] below for further details). Where First Nations relevant persons provided feedback in relation to the titleholder's environmental management approach for the activity, the EP demonstrates that the titleholder considered that feedback and adopted appropriate measures such as additional commitments in the EP to ensure impacts and risks to First Nations cultural features and heritage values will be reduced and managed to ALARP and acceptable levels (see my reasons at [119] below for further details); and
- iv. I considered the rationale presented by the titleholder to support its case that a reasonable period was provided for First Nations relevant persons to participate in consultation for this EP. Section 5.6.2 of the EP details that the titleholder's process included a minimum of 30 days for the consultation period. I note that the multiple iterations of the EP have resulted in the consultation period for the EP extending beyond that period.

115. In forming a view as set out at [114] above, I was aware that some First Nations relevant persons, had raised feedback or concerns with the titleholder regarding the consultation process. Whether or not a relevant person agrees that they have been adequately consulted, or that the consultation process was adequate, is not determinative of whether I am satisfied consultation has been carried out purposes of reg 11A. Rather, I need to consider all the facts and circumstances of the consultation. My consideration of the feedback and concerns regarding the consultation process was as follows:

- a. I noted that Bardi and Jawi Niimidiman Aboriginal Corporation (**BJNAC**) and Walalakoo Aboriginal Corporation (**WAC**) raised concerns about their lack of capacity to engage in the consultation process and requested or expressed interest a consultation protocol/agreement. In addition, I noted that BJNAC expressed a view that consultation had not commenced until a protocol/agreement was in place. The EP demonstrates that the titleholder agreed to progressing establishment of consultation protocols/agreements with these First Nations groups, but none of these had been finalised by the time the EP was submitted to NOPSEMA for assessment (on 10 November 2023). Although the consultation did not take place under consultation protocols/agreements as requested by these First Nations groups, I found that there was other suitable evidence in the EP to form a view that the titleholder had still facilitated consultation in line with the requirements in regs 11A, and a

reasonable opportunity to participate in the consultation in preparation of the EP had been afforded. For example, further to my reasons above at [114], I found that:

- i. the titleholder had provided these First Nations groups with an initial invitation to consult on the EP in March 2023, more than seven months before the EP was submitted to NOPSEMA for assessment. This included an offer to attend the titleholder's Indigenous Forums with the provision of travel and accommodation support, noting that no representatives from these First Nations groups attended any of the forum sessions. Advice was also sought on their preferred method of engagement, with an offer to meet at a time and location of choice including on-country;
  - ii. the titleholder had provided these First Nations groups sufficient information about the proposed activity in various forms and formats to allow an initial judgement on the possible consequences of the activity on their functions, interests or activities; and provide feedback or request clarifying information. This included an activity-specific fact sheet, a link to a webpage with Crux Project information, and a link to a webpage containing the draft EP for the activity. These First Nations groups had approximately five months to consider the information of which was initially provided to them in May 2023;
  - iii. the titleholder attended face-to-face consultation meetings with these First Nations groups (i.e., on two occasions with BJNAC on 15 and 25 August 2023 and on one occasion with WAC on 15 August 2023). During these meetings, information relating to the nature of the proposed activity and its impacts and risks was communicated by the titleholder in verbal format (and in some instances supported with PowerPoint presentations that contained various pictorials and graphics). In these meetings, the First Nations groups had the opportunity to provide feedback about how their functions, interests or activities may be affected; and
  - iv. the titleholder made offers and when requested provided these First Nations groups with various forms of assistance to support their participation in consultation. This included paying for all reasonable costs associated with attending consultation meetings such as travel, accommodation and sitting fees, and offering to make available and cover the costs of an independent environmental panel to provide technical support and advice since May 2023, which appears was not taken up by these First Nations groups.
- b. I noted that WAC, Dambimangari Aboriginal Corporation (**DAC**), Nyul Nyul PBC Aboriginal Corporation (**NNPBCAC**), and Wanparta Aboriginal Corporation (**Wanparta AC**) made requests for consultation meetings with the titleholder that had not yet taken place by the time the EP was submitted to NOPSEMA for assessment (on 10 November 2023). In the case of WAC, the EP demonstrates that the titleholder made attempts to progress with an additional meeting prior to the submission of the EP, but the EP records indicates that WAC was non-responsive despite multiple follow up attempts made (i.e., via emails on 23 August 2023 and 17 October 2023) over a reasonable timeframe (i.e., approximately two months) by the titleholder to confirm meeting arrangements. In the case of DAC, NNPBCAC and Wanparta AC, the EP demonstrates that the meetings were requested late in the consultation process after approximately six months had elapsed since the titleholder's initial invitation to consult. Although these requested meetings had not taken place at the time of EP submission, I found that there was other suitable evidence in the EP to form a view that the titleholder had still facilitated consultation in line with the requirements in regs 11A, and a reasonable opportunity to participate in the consultation in preparation of the EP had been afforded to the relevant persons. For example, further to my reasons above at [114], I found that:
- i. in relation to WAC, I refer to the same reasons provided above at [115.a.i-iv]; and

- ii. in relation to DAC, NNPBCAC and Wanparta AC, the same reasons provided above for WAC at [115.a.i-iv] are also applicable for these relevant persons, noting the differences in the number of face-to-face meetings that took place during the consultation process (i.e., DAC on one occasion on 19 September 2023, Wanparta AC on one occasion on 16 August 2023, and on no occasions with NNPBCAC).
- c. I noted that WAC, Nyamba Buru Yawuru Aboriginal Corporation (**NBYAC**) and Kimberley Jiyigas (**KJ**) provided feedback in relation to the consultation process adopted by the titleholder not being culturally appropriate and/or unlikely to result in meaningful consultation. However, I found that the records of consultation presented in the EP and sensitive information report, demonstrates that the titleholder adapted its approach to consultation with these relevant persons as far as reasonably practicable, in response to the feedback provided to ensure that culturally appropriate and meaningful consultation took place. For example:
- i. on 20 July 2023, WAC requested a culturally appropriate consultation process, including with cultural block neighbours (Bardi Jawi Niimidiman PBC and Mayala Inninalang PBC), involving three community-based meetings and a separate men's and women's meeting to discuss and respond to the specific impacts to traditional cultural practices. In response to this feedback, the titleholder agreed to and attended a joint meeting with WAC and their cultural block neighbours on 15 August 2023 at their preferred meeting location. The titleholder also made attempts to progress with additional meetings suggested by WAC, but as noted in findings at [115.b] above, the record presented in the EP shows WAC did not respond to provide confirmation of meeting arrangements, despite follow-up attempts made over a reasonable timeframe (i.e., approximately two months) by the titleholder;
  - ii. on 5 May 2023, NBYAC raised concerns with the titleholder about their consultation process being unlikely to result in a meaningful engagement with the Yawuru Community, given the lack of engagement with the Yawuru PBC and the short timeframes that the titleholder allowed for the consultation at that time. In response to this feedback, the titleholder agreed to and attended a meeting with the Yawuru PBC on 18 May 2023 at their preferred meeting location. It also appears that the titleholder made an offer in July 2023 for additional meetings with the Yawuru PBC, which have not been taken up at the time of EP submission on 10 November 2023; and
  - iii. on 10 May 2023, KJ attended one of the titleholder's Indigenous Forums held in Broome and provided the titleholder with suggestions on consultation approaches for Indigenous communities. The EP demonstrates that the titleholder updated and adapted their approach to consultation with Indigenous people and organisations as a result of this feedback from the Indigenous Forum in Broome, as reflected in Section 5.6.5 of the EP, by offering and prioritising face to face meeting opportunities with all First Nations relevant persons and consulting representative bodies of First Nations people and organisations based on their preferred method of engagement as far as reasonably practicable. There is also information presented in Table 5.12 of the EP that provides a reasonable justification for why the titleholder did not adopt the suggestion by KJ of establishing an Indigenous advisory committee to support consultation with Indigenous people and organisations. This was on the basis that the titleholder had already engaged specialist consultants with suitable qualifications and experience to support them with carrying out consultation with Indigenous people and organisations.
116. For the reasons given above, I found that consultation as required by reg 11A(2) and reg 11A(3) with First Nations relevant persons had been undertaken, although I acknowledge that some relevant persons may have a different view. However, I am satisfied on the information before me that a reasonable opportunity has been afforded to relevant persons to be consulted on the activity in preparation of the EP.

117. I noted the consultation records in the EP show that the titleholder provided information to First Nations relevant persons under reg 11A(1)(d) regarding the titleholder's consultation obligations and relevant persons' rights in line with reg 11A(4), and advised First Nations relevant persons under reg 11A(1)(d) within emails that they can make requests for sensitive information to remain confidential to NOPSEMA. I also noted that no such requests were made by First Nations relevant persons under reg 11A(1)(d).
118. For reasons set out in [108] – [117] above, I was, accordingly, reasonably satisfied that reg 10A(g)(i) was met, as it relates to the titleholder's consultations with First Nations relevant persons under reg 11A(1)(d).
119. Having found that reg 10A(g)(i) was satisfied, I then considered whether the titleholder adopted, or proposed to adopt, appropriate measures in light of those consultations with First Nations relevant persons under reg 11A(1)(d). I found that:
- a. the EP includes a summary of any feedback, objections or claims raised by First Nations relevant persons in Tables 5.10 to 5.12 of the EP, along with the titleholder's assessment of the merits of any feedback, objections or claims and its response, and corresponding measures adopted;
  - b. the EP demonstrates that all First Nations cultural features and heritage values identified by First Nations relevant persons during consultation have been appropriately incorporated into the EP by the titleholder (refer to Sections 7.4.1 and 7.4.2) and taken into account within impact and risk evaluation processes where applicable to demonstrate how potential environmental impacts and risks on these features and values will be reduced to ALARP and acceptable levels (refer to Sections 8 and 9);
  - c. the EP demonstrates the titleholder's assessments of merit and responses to objections and claims raised by First Nations relevant persons were reasonable, and the measures adopted because of the consultation were appropriate. I also noted that:
    - i. in some cases, the titleholder's assessment of the merits of objections and claims did not result in the adoption of additional measures when they were not reasonably practicable to implement and/or necessary to demonstrate that impacts and risks will be reduced to ALARP and acceptable levels; and
    - ii. in other cases, the titleholder's assessment of the merits of objections and claims did result in the adoption of additional measures when they were reasonably practicable to implement and/or necessary to demonstrate that impacts and risks will be reduced to ALARP and acceptable levels. For example:
      - A. the titleholder committed to progressing a local spill response with BJNAC (Table 5-13);
      - B. the titleholder committed to notify Northern Land Council in the event of an emergency spill event, which has the potential to impact communities and environments in the Top End (Table 10-4); and
      - C. the titleholder committed to notify Larrakia Development Corporation in the event of an emergency spill event which has the potential to impact Larrakia country (Table 10-4).
120. On the basis of the matters outlined above, I was reasonably satisfied that the measures adopted by the titleholder because of the consultations with First Nations relevant persons under reg 11A(1)(d) are appropriate, and reg 10A(g)(ii) was met.

Other 'relevant persons'

121. In relation to the other relevant persons under reg 11A(1)(d), that includes persons or organisations within the broad categories of “commercial fisheries” (49), “titleholders and operators” (36), “commercial operators” (145), “interest groups” (17), “non-government organisations” (31), “academic and research” (8), “industry representative bodies” (7), “service providers” (15), and “local councils” (14) as identified at [105] above, I found that Table 5.6 provides a comprehensive overview of who has been identified as a relevant person for the purposes of reg 11A(1)(d), includes details of the rationale the titleholder has used to determine who they consider fall within that definition and broadly describes the functions, interests or activities of those persons or organisations.
122. I was reasonably satisfied that the consultation process provided for broad capture of ascertainable persons and organisations who may have their functions, interests or activities affected by the proposed activity for the purposes of reg 11A(1)(d). This was because, as I have outlined previously in [90] – [92] above, the EP describes a clear process for the identification and broad capture of relevant persons in accordance with reg 11A(1), of which has provided for the identification of relevant persons as defined by regs 11A(1)(d)).
123. I considered that relevant persons for the purposes of reg 11A(1)(d) may include persons and organisations located outside Australia if they have functions, interests or activities that may be affected by the activity as neither ‘relevant persons’ or ‘functions, interests or activities’ are geographically limited. I found that the titleholder’s approach to identifying relevant persons under reg 11A(1)(d) had also considered this within Sections 5.5.2.9 to 5.5.5.10 of the EP. I was satisfied, based on the details provided, that the titleholder’s approach to identifying relevant persons located outside of Australia was appropriate for the nature and scale of the activity, and the likelihood and magnitude of impacts to persons and organisations located outside of Australia. I noted that:
- a. the OA is located entirely within Commonwealth waters; however, the Planning Area extends into international waters, intersects with Indonesia and Timor Leste coastlines located more than 300 km away from the OA, and overlaps the Memorandum of Understanding Box within which traditional Indonesian fishing is permitted;
  - b. the EP does not identify any planned impacts from the activity that may affect the functions, interests or activities of persons and organisations located outside of Australia; and
  - c. in relation to unplanned events, such as an oil pollution incident, the titleholder considered the conservatism of the oil spill modelling, the preventative controls in place to reduce the likelihood of the event occurring and the spill response control measures that would be implemented in the event of a spill in determining the approach to consultation. I agreed with the titleholder’s conclusion that there is only a remote likelihood that the functions, interests and activities of persons and organisations located outside of Australia may be affected by the activity. I considered that the titleholder sought to reasonably ascertain relevant persons located outside of Australia, in a manner proportionate to the remote likelihood of any effect on the functions, interests or activities of those persons or organisations.
124. I note that the probability of relevant persons outside Australia’s jurisdiction being affected by an unplanned hydrocarbon spill is remote and the degree to which relevant persons functions, interests and activities would be affected are highly uncertain and dependent on the particular nature of the incident, conditions at the time, and the implementation of available mitigations to reduce the extent, severity and duration of a spill. Having considered the various methods adopted by the titleholder to provide an opportunity for relevant persons outside Australia to self-identify as detailed within Sections 5.5.2.9 to 5.5.5.10 of the EP, as well as the remote potential for the relevant persons functions, interests or

activities to be affected, I was satisfied that the consultation obligation has been discharged with these relevant persons.

125. In relation to the titleholder's consultations with other relevant persons under reg 11A(1)(d), I considered that the information the titleholder provided to these relevant persons was sufficient to allow them to make an informed assessment of the possible consequences of the activity on their functions, interests or activities (as per reg 11A(2)) and that a reasonable period for the consultation was provided (as per reg 11A(3)). This was because the consultation records in the EP (including the sensitive information part) demonstrate that the consultation was implemented by the titleholder in line with method described at [94] – [94] above.
126. I noted the consultation records in the EP show that the titleholder provided information to other relevant persons under reg 11A(1)(d) regarding the titleholder's consultation obligations and relevant persons rights in line with reg 11A(4). I also noted that no such requests were made by other relevant persons under reg 11A(1)(d).
127. For reasons set out in [121] – [126] above, I was, accordingly, reasonably satisfied that reg 10A(g)(i) was met, as it relates to the titleholder's consultations with other persons under reg 11A(1)(d).
128. For the purposes of reg 10A(g)(ii), as it relates to the titleholder's consultations with other relevant persons under reg 11A(1)(d), I found that most relevant persons provided no feedback or objections to the activity in response to consultation requests. When a response was received, it was typically in the form of feedback, as opposed to an objection or claim relating to an adverse effect of the activity and in each case the titleholder identified this and indicated what changes were made to the EP in response. For example, the titleholder made updates to the GHG impact and risk evaluation in response to feedback provided by Greenpeace (Section 9.12) and committed to the application of a compensation mechanism for commercial fishers in the event of an unplanned spill or introduction of invasive marine species in response to consultation with the Western Australian Fishing Industry Council (Section 10.7.6). I considered that these measures were appropriate based on the nature of the feedback provided, and therefore that reg 10A(g)(ii) was met.
129. Considering the matters discussed above, I was reasonably satisfied that, in relation to relevant persons as defined by reg 11A(1)(d), the EP demonstrates that the titleholder has carried out the consultations required by Division 2.2A and the measures (if any) that the titleholder has adopted, or propose to adopt, because of the consultations are appropriate, as required by reg 10A(g).

#### ***Relevant Persons under Regulation 11A(1)(e)***

130. Reg 11A(1)(e) states that a titleholder must consult with 'any other person or organisation that the titleholder considers relevant'.
131. Section 5.5.3.3 of the EP outlines the process for the identification of any other person or organisation that the titleholder considers relevant, which I considered to be appropriate given this category is at the discretion of the titleholder. Table 5.6 of the EP provides the titleholder's assessment of the 32 persons or organisations that are considered to be a relevant person under reg 11A(1)(e), within the broad categories of "commercial fishers" (2), "interest group" (3), "Indigenous organisations and people" (4), and "self-identified via community drop-in session" (23).
132. I considered that sufficient information and a reasonable period was provided to allow the relevant persons under reg 11A(1)(e) to make an informed assessment of the possible consequences of the activity on the functions, interests or activities. The EP records indicate the titleholder provided sufficient



information and a reasonable period in a similar way to my findings at [93] – [94] above, and responded reasonably to requests for information or other feedback received. I noted that the titleholder also followed up to provide a reasonable opportunity to respond where no response was forthcoming from these relevant persons.

133. I noted the consultation records in the EP show that the titleholder provided information to relevant persons under reg 11A(1)(e) regarding the titleholder's consultation obligations and relevant persons rights in line with reg 11A(4). I also noted that no such requests were made by relevant persons under reg 11A(1)(e).
134. For reasons set out in [131] – [133] above, I was, accordingly, reasonably satisfied that reg 10A(g)(i) was met.
135. Finally, I noted that the nature of responses from most relevant persons under reg 11A(1)(e) were requests for information or feedback for the titleholder to consider in undertaking consultation, as opposed to objections or claims regarding adverse impacts of the activity. Where feedback was received, the EP identified this and indicated what changes were made to the EP in response. For example, a large part of the feedback was that certain relevant persons wanted to be kept informed about the proposed activity which the EP commits to. I considered that these measures were appropriate, and therefore reg 10A(g)(ii) was met.

### **The EP complies with the Act and Regulations: regulation 10A(h)**

136. I considered the EP and was satisfied that it was compliant with the Act and Regulations, in particular that:
- a. the EP does not allow for any equipment that is not to be used for future production to be left on the seabed at the completion of the activity and includes provision for the inspection, maintenance, monitoring, and repair of subsea infrastructure installed for future production, consistent with the requirements of section 572 of the OPGGS Act (see Section 2.3.9). All equipment being installed above the mudline has been designed to allow for complete removal and onshore disposal. Final decommissioning of the wells and other subsea infrastructure at the end of field life will be subject to a separate EP. In the event that a well is required to be plugged and abandoned, the titleholder has committed to cutting the wellhead/casing strings below the level of the sea floor and recovering the wellhead to surface (Section 6.5.7.2); and
  - b. consultation with relevant persons (Section 5) has informed the titleholder in its obligations under section 280 of the OPGGS Act that, the proposed petroleum activity will not interfere with navigation, fishing, conservation of resources of the sea and seabed, other offshore electricity infrastructure and petroleum activities, and the enjoyment of native title rights and interests (within the meaning of the *Native Title Act 1993*) to a greater extent than is necessary for the reasonable exercise of the titleholder's rights and obligations.
137. For the reasons set out above (at [19] – [44]) I was satisfied that the EP addressed the content requirements of regs 13-16 of the 2009 Environment Regulations with enough clarity, consistency and detail commensurate to the nature and scale of the activity. Specifically:
- a. the titleholder has submitted the EP in writing as required by regulation 9(6) of the 2009 Environment Regulations; and
  - b. the EP commits to complying with the requirements in regs 26, 26A, 26AA, 26B, 26C, 27, 28 and 29 regarding various notifications and reporting to NOPSEMA, as well as storage and access to records (Section 10).

138. Based on the above, I was reasonably satisfied that the EP met the requirements of reg 10A(h).

## Other considerations

### Principles of ecological sustainable development (ESD)

139. The 2009 Environment Regulations provide that their object is to ensure that any activity or greenhouse gas activity carried out in an offshore area is carried out in a manner consistent with the principles of ESD set out in section 3A of the EPBC Act. I considered that the EP was consistent with the principles of ESD, as provided below:

- a. Decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations (the 'integration principle'):
  - i. the EP includes the titleholder's evaluation of the socio-economic, cultural and ecological features of the environment that may be affected by the activity (the Planning Area) and consultation with relevant persons which demonstrates an integrated approach to considering all environmental features, including relevant social, cultural and economic features that make up the definition of environment under reg 4. Further, the EP includes an evaluation of the potential impacts and risks of the petroleum activity on cultural heritage, commercial fisheries, traditional fisheries, tourism and recreation, commercial shipping, oil and gas activities and defence activities. I considered that the EP demonstrated that both long term and short term economic, environment, social and equitable considerations have been considered and addressed.
- b. 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 'precautionary principle'):
  - i. the EP detailed the titleholder's evaluation of environmental impacts and risks, the reasons and evidence in support of how the impacts and risks will be of an acceptable level and suitable approaches for addressing scientific uncertainty associated with predictions of environmental impacts and risks and the measures in place for continuing to identify and manage impacts and risks during the life of the activity. Consideration was also given in the EP to the effectiveness of management measures in ensuring the petroleum activity will not result in serious or irreversible environmental harm, specifically it was noted that the petroleum activity will not have a significant impact on a MNES and will not result in serious or irreversible environmental damage. I considered that the EP's discussion of these matters was consistent with the application of the precautionary principle.
- c. 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 'intergenerational principle'):
  - i. the EP identifies appropriate measures to minimise the environmental impacts and risks of the petroleum activity. The titleholder applied a mitigation hierarchy, such that where avoidance was not possible, control measures were adopted to ensure impacts and risks are managed to ALARP and an acceptable level. I considered this was consistent with the intergenerational principle.
- d. The conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making (the 'biodiversity principle'):
  - i. the EP included the titleholder's evaluation of environmental impacts and risks to the biodiversity and ecological values of the Commonwealth marine area, including EPBC Act

- listed threatened and/or migratory species, and the EPOs defined in the EP. I noted that the titleholder defined acceptable levels of impact and risk for biodiversity and ecological values at levels that are below the significant impact criteria (defined in Significant Impact Guidelines 1.1 – Matters of National Environmental Significance) for matters protected under Part 3 of the EPBC Act;
- ii. there is evidence in the EP that the titleholder undertook a robust evaluation of environmental impacts and risks using appropriate impact assessment tools (such as noise and oil spill modelling) to provide the basis for assessing higher order impacts and risks and demonstrating that impacts and risks will be managed at or below the acceptable level;
  - iii. the EP contains an assessment against relevant requirements of statutory instruments to demonstrate that the activity would not be inconsistent with these instruments (such as the Conservation Management Plan for the Blue Whale 2015-2025 and the Recovery Plan for Marine turtles in Australia 2017-2027);
  - iv. the environmental impact and risk evaluations and EPOs in the EP, collectively demonstrate that the activity will be managed such that impacts and risks to biological diversity and the ecological integrity of the Commonwealth marine area will be of an acceptable level; and
  - v. I concluded that the petroleum activity will not have a significant impact on MNES protected under the EPBC Act including World Heritage properties, National Heritage properties, Ramsar wetlands of international significance, listed threatened species and communities, listed migratory species, Commonwealth marine areas, and the Great Barrier Reef Marine Park.
- e. Improved valuation, pricing and incentive mechanisms should be promoted (the 'valuation principle').
- i. the EP construct is such that the titleholder is required to bear the costs relating to environmental management of the activity, to ensure that environmental impacts and risks are managed to ALARP and to an acceptable level. I considered that the onus is on the titleholder to protect ecological services and capital associated with the environment that may be affected by the activity, and to the extent that the valuation principle is relevant for an individual activity, the EP demonstrates compliance with Australian government legislation and policy requirements relating to environmental management.

### **The Program: protected matters under Part 3 of the EPBC Act**

140. The Program endorsed under section 146 of the EPBC Act outlines the environmental management authorisation process for offshore petroleum and greenhouse gas activities administered by NOPSEMA and requires NOPSEMA to comply with Program responsibilities and commitments.
141. In implementing the Program, NOPSEMA conducts assessments of EPs against the requirements of the Program, which includes meeting the acceptance criteria and content requirements under the 2009 Environment Regulations. Specific Program commitments relating to protected matters under Part 3 of the EPBC Act are outlined in Table 2 of the Program report and must be applied during decision-making with respect to offshore projects and activities.
142. I considered matters protected under Part 3 of the EPBC Act, including listed threatened and migratory species and the Commonwealth marine area, and was reasonably satisfied that the activity under the EP met the requirements of the Program on the basis that:
- a. the activity will not result in unacceptable impacts on listed threatened species and is not inconsistent with relevant recovery plans and threat abatement plans for listed threatened species. I have considered these documents when determining the acceptability of the EP where impacts to listed threatened species may arise;

- b. there are control measures in place to ensure that impacts to the Commonwealth marine area will be of an acceptable level, having regard to relevant policy documents, gazettal instruments, bioregional plans, wildlife conservation plans, plans of management and EPBC Act guidance documents on the DCCEE website; and
- c. there are control measures in place to ensure that the petroleum activity will not result in unacceptable impacts to a migratory species or an area of important habitat for a migratory species, having regard to relevant policy documents, wildlife conservation plans and guidelines on the DCCEE website.

### The Program: indirect consequences of an action

143. Under the Program, NOPSEMA must have regard to EPBC Act requirements, including *EPBC Act Policy Statement - 'Indirect consequences' of an action: Section 527E of the EPBC Act (indirect consequences policy)*. NOPSEMA gives consideration to the policy to determine where indirect consequences may be considered an 'impact' of a petroleum activity. This consideration is on a case-by-case basis against the particular circumstances of the petroleum activity in accordance with the criteria set out in the policy.
144. In assessing the EP, I had regard to the indirect consequences policy, in particular in relation to indirect GHG emissions. I gave consideration as to whether the petroleum activity is a substantial cause of GHG emissions from the processing, consumption and combustion of gas, and are facilitated to a major extent by the petroleum activity, within the contemplation of the titleholder, and are a reasonably foreseeable consequence of the petroleum activity.
145. Having regard to the indirect consequences policy, I agreed with the reasoning in the EP (specifically, Appendix F) and was satisfied that:
- a. the activity the subject of this EP relates to the activity the subject of this EP relates to the installation of a drilling template and docking pile and development drilling. The extraction of gas for processing is therefore not authorised by my decision;
  - b. while the activity is a necessary precursor to the extraction of gas, further activities are required prior to the point any gas can be extracted, processed, consumed or combusted and will themselves be subject to a separate assessment and approval process; and
  - c. future activities require their own EP under the Environment Regulations including consideration of the indirect consequences policy and appropriate coverage of impacts for each activity, based on the specific circumstances. Therefore, I considered that emissions from gas processing, consumption and combustion of gas are not facilitated to a major extent by the activity and would not be considered a substantial cause of emissions generated in the future from processing, consumption, or combustion of gas.

### The Program: cumulative environmental impacts

146. In the context of the Program, cumulative impacts refer to the direct and indirect impacts of a number of different petroleum activity actions that may influence the natural environment or other users within a locality or region, which when considered together, have a greater impact on the offshore marine environment than each action or influence considered individually.
147. NOPSEMA considered the potential for cumulative environmental impacts to the Commonwealth marine area as required by the Program. NOPSEMA is reasonably satisfied that the environmental impacts of the petroleum activity combined with existing and future pressures on the Commonwealth marine area would be of an acceptable level, because:
- a. the EP considered the potential cumulative impacts of drilling up to five development wells within the OA, including cumulative disturbance to marine sediment quality and benthic communities, and



cumulative noise impacts to marine fauna from elevated noise levels associated with multiple noise emitting sources. The impact evaluations in combination with the associated control measures provide confidence that impacts of the petroleum activity, when considered in the context of other anthropogenic pressures, will be of an acceptable level; and

- b. I noted that other petroleum activities proposed for the Crux Project will be subject to separate EPs, of which NOPSEMA will consider as part of the EP assessment, the potential for cumulative impacts to the Commonwealth marine area.

## Conclusion

148. For the reasons set out above, I was reasonably satisfied that the EP met the following criteria set out in sub-reg 10A of the 2009 Environment Regulations and should therefore be accepted:

- a. the EP is appropriate for the nature and scale of the activity; and
- b. the EP demonstrates that the environmental impacts and risks of the activity will be reduced to as low as reasonably practicable; and
- c. the EP provides for appropriate EPOs, EPSs, and measurement criteria; and
- d. the EP includes an appropriate implementation strategy and monitoring, recording and reporting arrangements; and
- e. the EP does not involve the activity or part of the activity, other than arrangements for environmental monitoring or for responding to an emergency, being undertaken in any part of a declared World Heritage property within the meaning of the EPBC Act; and
- f. the EP demonstrates that:
  - i. the titleholder has carried out the consultations required by Division 3; and
  - ii. the measures (if any) that the titleholder has adopted, or proposes to adopt, because of the consultations are appropriate; and
- g. the EP complies with the Act and the regulations.

Signed

**Director – Regulatory Strategy, Improvement and Reporting** (formerly Environment Manager – Drilling and Spill Risk)

18 April 2024

## Appendix A: Relevant terms

149. In this statement, the words and phrases have the following meaning:

- a. The Offshore Petroleum and Greenhouse Gas Storage Act 2006 is referred to as the OPGGS Act.
- b. The National Offshore Petroleum Safety and Environmental Management Authority is referred to as NOPSEMA.
- c. The Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 20209 are referred to as the '2009 Environment Regulations'.
- d. The Environment Plan (EP) means the Crux Development Drilling Environment Plan (Document No: 2200-010-HX-5880-00001, Revision 6, dated 9 November 2023).
- e. The Environment Protection and Biodiversity Conservation Act 1999 is referred to as the EPBC Act.
- f. The titleholder means Shell Australia Pty Ltd.
- g. The term 'petroleum activity' means the Crux development drilling activity.
- h. The term 'environment' means:
  - i. ecosystems and their constituent parts, including people and communities; and
  - ii. natural and physical resources; and
  - iii. the qualities and characteristics of locations, places and areas; and
  - iv. the heritage value of places; and includes
  - v. the social, economic and cultural features of the matters mentioned in paragraphs (i), (ii), (iii) and (iv).
- i. The term 'environmental impact' means any change to the environment, whether adverse or beneficial, that wholly or partially results from an activity.
- j. The term 'control measure' means a system, an item of equipment, a person or a procedure, that is used as a basis for managing environmental impacts and risks.
- k. The term 'environmental management system' includes the responsibilities, practices, processes and resources used to manage the environmental aspects of an activity.
- l. The term 'environmental performance' means the performance of a titleholder in relation to the environmental performance outcomes and standards mentioned in an environment plan.
- m. The term 'environmental performance outcome' (EPO) means a measurable level of performance required for the management of environmental aspects of an activity to ensure that environmental impacts and risks will be of an acceptable level.
- n. The term 'environmental performance standard' (EPS) means a statement of the performance required of a control measure.
- o. The term 'principles of ecologically sustainable development' (ESD) means the principles of ESD set out in Section 3A of the EPBC Act.
- p. The term 'relevant person' has the meaning provided under regulation 11A of the 2009 Environment Regulations.
- q. The term 'Operational Area' (OA) is taken to be the operational area for the petroleum activity as defined in Section 6.2 of the EP.

- r. The Program Report – Strategic Assessment of the environmental management authorisation process for petroleum and greenhouse gas storage activities administered by the National Offshore Petroleum Safety and Environmental Management Authority under the Offshore Petroleum and Greenhouse Gas Storage Act 2006 that was endorsed on 7 February 2014, is referred to as the Program.
  - s. The term ‘as low as reasonably practicable’ is referred to as ‘ALARP’.
150. Terms used in this Statement of Reasons which are defined in the Environment Regulations or the OPGGS Act have the same meaning as under the 2009 Environment Regulations or OPGGS Act.

## Appendix B: Legislative framework

151. All offshore petroleum activities that are undertaken for the purpose of petroleum recovery, other than on an appraisal basis, are required to have an Offshore Project Proposal (**OPP**) accepted by NOPSEMA under the Environment Regulations or an equivalent approval by the Environment Minister under the EPBC Act.
152. The OPP framework enables a proponent to achieve a whole of project authorisation; however, it does not permit offshore petroleum activities to commence until an EP (or multiple EPs) for the activities has been accepted by NOPSEMA under the Environment Regulations.
153. Additional approvals may be required before a titleholder can commence a petroleum activity. A Well Operations Management Plan (WOMP) is required to be accepted by NOPSEMA under the Offshore Petroleum and Greenhouse Gas Storage (Resource Management and Administration) Regulations 2011 for petroleum activities that involve well-related activities. A Safety Case is required to be accepted by NOPSEMA under the Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009 for facilities involved in the petroleum activity.
154. The 2009 Environment Regulations provide that:
- a. Before commencing a petroleum activity<sup>2</sup>, a titleholder must submit an EP for the petroleum activity to the Regulator (reg 9(1)).
  - b. A petroleum activity means any operation or works in an offshore area carried out for the purpose of (a) exercising a right conferred on a petroleum titleholder under the OPGGS Act by a petroleum title; or (b) discharging an obligation imposed on a petroleum titleholder by the OPGGS Act or a legislative instrument under the OPGGS Act (reg 5).
  - c. An EP for a petroleum activity that is, or is part of, an offshore project may only be submitted if the Regulator has accepted an OPP that includes that activity or if the Environment Minister has made a decision or granted approval under the EPBC Act relating to an action that is equivalent or includes that activity (reg 9(3)).
  - d. If a titleholder submits an EP, the Regulator may request the titleholder to provide further written information about any matter required by the 2009 Environment Regulations to be included in the EP (reg 9A).
  - e. If a titleholder receives a request under regulation 9A, they must provide the information requested by incorporating the information into the EP and resubmitting the EP within the period specified or within a longer period agreed to by the Regulator.
  - f. If the EP is resubmitted under reg 9A, the Regulator must have regard to that further information in making the decision under reg 10.
  - g. Within 30 days after the day the Regulator publishes the EP (reg 9AB) if the Regulator is:
    - i. reasonably satisfied that the EP meets the criteria set out in regulation 10A, the Regulator must accept the EP (regulation 10(4)(a));
    - ii. not reasonably satisfied that the EP meets the criteria set out in regulation 10A, the Regulator must give the titleholder notice in writing (regulation 10(4)(b)); or

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<sup>2</sup> Petroleum activity is defined under regulation 4 of the 2009 Environment Regulations.



- iii. if the Regulator is unable to make a decision on the EP within the 30 day period, the Regulator must give the titleholder notice in writing and set out a proposed timetable for consideration of the EP (regulation 10(4)(c)).
  - h. A notice to a titleholder under regulation 10(4) must:
    - i. state that the Regulator is not reasonably satisfied that the EP submitted by the titleholder meets the acceptance criteria set out in regulation 10A;
    - ii. identify the criteria set out in regulation 10A about which the Regulator is not reasonably satisfied; and
    - iii. set a date by which the titleholder may resubmit the EP.
  - i. Pursuant to regulation 5G, NOPSEMA must not accept an environment plan unless it is reasonably satisfied that the titleholder is compliant with subsection 571(2) of the Act in relation to the petroleum activity, and the compliance is in a form that is acceptable to NOPSEMA.
  - j. Regulation 10A provides the acceptance criteria the Regulator must consider in determining whether to accept an EP, and includes that the plan:
    - i. is appropriate for the nature and scale of the activity;
    - ii. demonstrates that the environmental impacts and risks of the activity will be reduced to ALARP;
    - iii. demonstrates that the environmental impacts and risks of the activity will be of an acceptable level;
    - iv. provides for appropriate environmental performance outcomes (EPOs), environmental performance standards (EPSs) and measurement criteria;
    - v. includes an appropriate implementation strategy and monitoring, recording and reporting arrangements;
    - vi. does not involve the activity or part of the activity, other than arrangements for environmental monitoring or for responding to an emergency, being undertaken in any part of a declared World Heritage property within the meaning of the EPBC Act;
    - vii. demonstrates that:
      - A. the titleholder has carried out the consultation required by Division 2.2A; and
      - B. the measures (if any) that the titleholder has adopted, or proposes to adopt, because of the consultation are appropriate; and
    - viii. complies with the OPGGS Act and the 2009 Environment Regulations.
  - k. Reg 10(6)(b) provides that the Regulator may accept the plan subject to limitations or conditions applying to operations for the activity.
155. The 2009 Environment Regulations provides for the authorisation of a petroleum activity, but does not authorise an oil spill, which is considered for risk evaluation and contingency planning in the EP only. Section 569 of the OPGGS Act places obligations on petroleum titleholders to control the flow and prevent the escape of petroleum within the permit area, lease area or licence area.
156. The 2009 Environment Regulations impose a duty on the titleholder to demonstrate to NOPSEMA in the EP that a proposed activity will be carried out in a manner:
- a. consistent with the principles of ecological sustainable development set in section 3A of the EPBC Act; and

- b. by which impacts and risks of the activity will be reduced to as low as reasonably practicable (ALARP) and acceptable levels.

## Appendix C: Key materials considered in making the decision

157. In making this decision, NOPSEMA considered the documents making up the EP submission in accordance with legislative requirements and NOPSEMA's policies and procedures. The key material that NOPSEMA had regard to in making this decision includes, but not limited to:

- a. The EP, comprising:
  - i. Crux Development Drilling Environment Plan (EP) (Document No. 2200-010-HX-5880-00001, Revision 6, dated 09 November 2023);
  - ii. Browse Regional Oil Pollution Emergency Plan (OPEP) (Document No. HSE\_GEN\_016765, Revision 1, dated 29 July 2022);
  - iii. Browse Regional Operational and Scientific Monitoring Bridging Implementation Plan (OSMBIP) (Document No. HSE\_PRE\_016370, Revision 3, dated 27 July 2022); and
  - iv. Crux Development Drilling Sensitive Information Report (Document No. SAPL-HSECRU\_18286, Revision 2, dated 01 November 2023).
- b. Crux Project Offshore Project Proposal (Document No. HSE\_CRU\_014827, Revision 7, dated 19 June 2020) accepted by NOPSEMA on 03 August 2020;
- c. The legislative framework relevant to EP assessments, including:
  - i. the OPGGS Act;
  - ii. the 2009 Environment Regulations; and
  - iii. the Program<sup>3</sup>.
- d. NOPSEMA Environment plan assessment policies, guidelines and guidance:
  - i. NOPSEMA Assessment policy (N-04000-PL0050);
  - ii. NOPSEMA Environment plan assessment policy (N-04750-PL1347);
  - iii. NOPSEMA Financial assurance for petroleum titles policy (N-04730-PL1780);
  - iv. NOPSEMA Section 572 Maintenance and removal of property regulatory policy (N-00500-PL1903);
  - v. NOPSEMA Managing gender-restricted information (draft) (N-04750-PL2098);
  - vi. NOPSEMA Financial assurance for petroleum titles guideline (N-04730-GL1381);
  - vii. NOPSEMA Environment plan decision making guideline (N-04750-GL1721);
  - viii. NOPSEMA Consultation in the course of preparing an Environment Plan guideline (N-04750-GL2086);
  - ix. NOPSEMA Environment plan content requirements guidance note (N-04750-GN1344);
  - x. NOPSEMA Making submissions to NOPSEMA guideline (N-04000-GL0225);
  - xi. NOPSEMA Petroleum activities and Australian marine parks guidance note (N-04750-GN1785);
  - xii. NOPSEMA Consultation with Commonwealth agencies with responsibilities in the marine area guideline (N-06800-GL1887);

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<sup>3</sup> <https://www.environment.gov.au/protection/assessments/strategic/offshore-petroleum-greenhouse-gas>

- xiii. NOPSEMA Oil pollution risk management guidance note (N-04750-GN1488);
  - xiv. NOPSEMA Operational and scientific monitoring programs information paper (N-04750-IP1349);
  - xv. NOPSEMA Acoustic impact evaluation and management information paper (N-04750-IP1765);
  - xvi. NOPSEMA Petroleum activity guidance note (N-04750-GN1343);
  - xvii. NOPSEMA Source control planning and procedures information paper (N-04750-IP1979);
  - xviii. NOPSEMA Environmental bulletin — oil spill modelling (April 2019);
  - xix. NOPSEMA Blue Whale Conservation Management Plan – Frequently asked questions (November 2021); and
  - xx. NOPSEMA Consultation on offshore petroleum environment plans brochure (May 2023).
- e. Procedures:
- i. NOPSEMA Environment plan assessment standard operating procedure (N-04750-SOP1369).
- f. Other relevant documents and records:
- i. NOPSEMA's assessment team notes regarding assessment of how the EP met the acceptance criteria set out in regulation 10A of the 2009 Environment Regulations;
  - ii. Published consultation guidance by relevant persons:
    - A. Australian Fisheries Management Authority, Petroleum industry consultation with the commercial fishing industry, available at: <https://www.afma.gov.au/petroleum-industry-consultation-commercial-fishing-industry>;
    - B. Department of Agriculture, Fisheries and Forestry (DAFF), Fisheries and the environment – Offshore Petroleum and Fisheries, available at: <https://www.agriculture.gov.au/agriculture-land/fisheries/environment/opgga>;
    - C. Department of Climate Change, Energy, the Environment and Water, Interim Engaging with First Nations People and Communities on Assessments and Approvals under the *Environment Protection and Biodiversity Conservation Act 1999* (2023);
    - D. WA Department of Fisheries, Guidance statement for oil and gas industry consultation with the Department of Fisheries, Fisheries Occasional Publication No. 113, July 2013;
    - E. WA Department of Transport, Offshore Petroleum Industry Guidance Note, Marine Oil Pollution: Response and Consultation Arrangements, July 2020; and
    - F. Western Australian Fishing Industry Council, Consultation approach for unplanned events, available at: <https://www.wafic.org.au/what-we-do/access-sustainability/oil-gas/consultation-approach-for-unplanned-events/>.
  - iii. relevant published, peer-reviewed scientific literature, including the scientific literature cited in the EP.
  - iv. relevant policies, plans of management, recovery plans, conservation advice and other guidance for matters protected under the EPBC Act, including, but not limited to:
    - A. Department of the Environment, Water, Heritage and the Arts, Significant Impact Guidelines 1.1 – Matters of National Environmental Significance, EPBC Act Policy Statement (2013);

- B. Department of Sustainability, Environment, Water, Population and Communities, 'Indirect consequences' of an action: Section 527E of the EPBC Act, EPBC Act Policy Statement (2013);
  - C. Department of the Environment and Energy, National Light Pollution Guidelines for Wildlife Including Marine Turtles, Seabirds and Migratory Shorebirds (2020);
  - D. Commonwealth of Australia, Recovery Plan for Marine Turtles in Australia 2017–2027 (2017);
  - E. Commonwealth of Australia, Conservation Management Plan for the Blue Whale 2015–2025 (2015);
  - F. Department of Agriculture, Water and the Environment, Guidance on key terms within the Blue Whale Conservation Management Plan (2021);
  - G. Commonwealth of Australia, Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (2018);
  - H. Commonwealth of Australia, Wildlife Conservation Plan for Seabirds (2020);
  - I. Commonwealth of Australia, Conservation Management Plan for the Southern Right Whale 2011-2021 (2012);
  - J. Commonwealth of Australia, National Recovery Plan for Albatrosses and Petrels (2022);
  - K. Commonwealth of Australia, Sawfish and River Shark Multispecies Recovery Plan (2015);
  - L. Department of Sustainability, Environment, Water, Population and Communities, Marine Bioregional Plan for the North-west Marine Region (2012);
  - M. Department of Sustainability, Environment, Water, Population and Communities, Marine Bioregional Plan for the North Marine Region (2012);
  - N. Director of National Parks, North-west Marine Parks Network Management Plan (2018);  
and
  - O. Director of National Parks, North Marine Parks Network Management Plan (2018).
- g. Relevant legislative requirements that apply to the activity and are relevant to the environmental management of the activity; and
  - h. Relevant Federal Court of Australia authority.