Item No.	Item	CGG Response
Acceptance Criteria 34 (a) - the EP is not appropriate for the nature and scale of the activity because:		
1.1	***The scope and bounds of the activity need to be more clearly defined.***	
	Issue: The EP should include a suitable description of the activity and how it may affect the environment, including the scope and bounds of the activity (**GL1721, Section 6.3**). The Activity Description in Appendix A2 provides definitions of the Operational Area (OA), Active Source Area (ASA), and a newly defined Survey Acquisition Area (SAA). However, the boundaries for these areas mapped in Appendix B12, and the description of activities elsewhere in Appendix A2 create uncertainty about where the sound source will be operated and where operational activities will take place. The proposed timing of the activity also requires clarification to ensure consistency throughout the EP.	The definitions of each of the areas has been reviewed and amended resulting in a reduced active source area and the introduction of a mitigation source area. The survey acquisition area also now includes the run outs, effectively reducing the area that the sound source is discharged at full power. All maps have been updated with the new areas. Crucially, the activity source area to the north of the survey has been excised. This removes the uncertainty associated with full power discharges resulting in unacceptable impacts to SRW in September.
	Reasons: Examples of inconsistencies regarding the survey boundaries and locations of specific activities include: The SAA boundary extends up to the boundary of the ASA, where the activity description suggests that north-westerly to south-easterly sail lines would begin/end (e.g. see Appendix B12, Maps 031_B, 089 and 090). The definitions of the OA, ASA and SAA areas in Section 3.4 and the definition of sail lines in Section 1.3 of Appendix A2 imply that the sound source will be active outside the SAA boundary during line run-ins and run-outs, however, the positioning of the SAA boundary relative to the ASA boundary seems to contradict this.	As above.
	The definition of the ASA in Section 3.4 states that line run-outs and run-ins will occur in the ASA. However, Section 3.4 also states that '*the sound source cannot be discharged at full power within the ASA and outside of the SAA*', despite seismic survey line run-outs typically involving the sound source operating at full power.	Run outs have been moved to be covered by the Survey Acquisition Area. Run ins (including ramp ups) are retained in the Active Source Area as the ramp ups may occur during the line turns.
	The activity limitation '*operate the sound source at low power during line turns and if transiting between survey lines anywhere in the operational area*' is inconsistent with '*the sound source cannot be active in the operational area outside of the active source area*' in the definition of the OA in Section 3.4 of Appendix A2.	The activity limitation has been edited to restrict low power operations to the Mitigation Source Area, Active Source Area, and Survey Acquisition Area which is consitent with the definitions.
	The SAA in Appendix B12 (MAP 031_B) appears to extend into water depths shallower than the 50m depth contour and outside of the ASA (see Appendix B12, MAP 031_B).	Maps updated.
	The map legends in Appendix B12 refer to a 'Previous Active Source Area', but NOPSEMA understands from the Activity Description in Appendix A2 that the ASA boundary is still current.	Maps updated.
	Section 3.2.1 of Appendix A2 states that '*the seismic and support vessels will conduct a few days of operational movements to deploy and test the equipment, which may occur within the OA or adjacent to it*'. It is not clear if the equipment testing described here includes testing of the sound source or not, noting that the area definitions in Section 3.4 state that the sound source cannot be active outside the SAA or ASA. The definition of the OA in Section 3.4 also implies that equipment deployment and recovery activities will occur within the OA, not 'adjacent' to it. Additionally, Table F2-10 rejects adoption of a measure to restrict deployment and retrieval of seismic gear to the OA and suggests CGG will deploy equipment en-route to the OA.	Updates have been made to A2 and F2 to clarify that the vessel movements outside of the Operational Area are not part of the petroleum activity and restricting them as such provides no environmental benefit and increases safety risks. Updates to A2 make it clear that testing of the sound source may only occur within the Active Source Area.
	Please also note that RFFWI Item 1.1 identified that the EP intermittently references a 'survey area' and it was unclear what area this term referred to. Although CGG has addressed some of these, there are still a few instances where the EP documents refer to a Regia 'survey area' with no explanation of whether this refers to the OA, ASA, SAA or if it is a collective term for all of these.	Checked and any retained references would mean all survey areas.
	With regards to survey timing, activity limitations provided in Section 4 of Appendix A2 infer that the survey may take place in either 'April, May or June' or in 'September, October, November or December', but there are examples in other appendices of the EP where the survey timing is not consistent with this (e.g. Section 3.14 of Appendix F3 which indicates survey timing is April-June and September-November). Additionally, EP Section 6 states that "The Regia MSS provided for in this EP is proposed to be carried out as per the Description of the Activity found in Appendix A2. This allows for the activity to be undertaken during a 5-year period, between 1 April 2024 (subject to acceptance of this EP by NOPSEMA) and 31 December 2028'; however, Appendix A2 (Table A2-1) describes the latest finish date for operations as the 31st of October 2028.	The dates have been updated to reflect the passage of time. The EP and all Appendicies checked. However, again, Appendix A2 is the single source of truth and is the document CGG expects to have compliance enforced against. If the impact/risk assessments include additional months it is artifact of the process and would mean a broader assessment than permission is being sought for - so this shouldn't be an issue.
1.2	***The EP does not demonstrate that the level of analysis and evaluation is commensurate with the nature and scale of the activity and the severity of individual impacts and risks – Physical presence – Commercial fishing***	
	Issue: The EP does not demonstrate that level of analysis and evaluation undertaken to assess the impacts to key commercial fisheries is commensurate to the nature and scale of the activity or the magnitude of impacts arising from the activity (**GL1721, Section 6.3**). The EP currently identifies the key Commonwealth and State fisheries that the survey is most likely to interact with, but the current level of analysis does not provide an indication of the proportion of key fishing grounds that could be affected or consider the fisheries' capacities to tolerate the predicted level of displacement / relocate to alternative viable areas. Therefore, the magnitude of potential impacts are not adequately predicted.	Additional analysis and evaluation has been undertaken to assess the impacts to key commercial fisheries and is provided in REG-EP-020-E1 Physical Presence Rev 3 Table E1-1 and Table E1-2. The analysis and evaluation has where relevant provides the proportion of key fishing grounds that could be affected or consider the fisheries' capacities to tolerate the predicted level of displacement / relocate to alternative viable areas.
	Reasons: There is no assessment of the proportion of overlap between the survey with areas of historical fishing effort in the Commercial Fisheries Review (Appendix B6) or physical presence impact assessment (Appendix E1). This is despite demonstrating this approach during consultation (Event ID 4934/5195) when further detail on activity overlap with the Commonwealth Trawl Fishery were requested by relevant persons. Such an analysis should consider an appropriate scale (e.g., regional level rather than 'whole of fishery') to provide a suitable and representative evaluation of impacts to local affected fishers, consider the different methods (e.g., 'static gear' – pots and gillnets vs 'mobile' – trawl and 'jigging'), and discuss the potential implications of relocating.	REG-EP-020-E1 Physical Presence Rev 3 Table E1 has been updated and a new table included that where relevant provides: •Assessment of the proportion of overlap between the survey with areas of historical fishing effort in the Commercial Fisheries Review (Appendix B6) or physical presence impact assessment (Appendix E1). •Considers an appropriate scale (e.g., regional level rather than 'whole of fishery') to provide a suitable and representative evaluation of impacts to local affected fishers. •Consider the different methods (e.g., 'static gear' – pots and gillnets vs 'mobile' – trawl and 'jigging'). •Discusses the potential implications of relocating.

	The EP does not demonstrate that the impacts from the activity have been adequately interpretated and evaluated due to the following: Discrepancy between the area referred to in the evaluation of physical presence impacts in Appendix E1 (Operational Area) and Activity Planning Area used in the historical fishing catch and effort figures in the Commercial Fisheries Review (Appendix B6). As the Operational Area represents '*the extent of the area where other marine users' activities may be affected by the physical presence of vessels and towed equipment*' as stated in Appendix E1, it would eliminate uncertainty around interpretation of impacts if the Commercial Fisheries Review were able to adopt this boundary throughout. The current situation of assessing fishing activity at one spatial extent and evaluating impacts at another spatial extent introduces uncertainty into accurate interpretation.	REG-EP-020-E1 Physical Presence Rev 3 and associated maps and areas of overlap have been updated such that the impact assessment is consistently based on the Operational Area.
	Potential inaccuracies of stated 'fishing day' numbers within the Operational Area in Table E1-1 for Victorian-managed Fisheries (including Giant Crab Fishery, Rock Lobster Fishery, Multispecies Ocean Fisheries, Wrasse (Ocean) Fishery and Octopus Fishery). For some fisheries, it appears they have not been interpreted at the appropriate level (i.e. Operational Area; see above bullet point). For other fisheries, it is unclear what figure or source was used to inform the 'days fished' described in Table E1-1. Consequently, this casts doubt over the qualitative 'activity level' conclusions made in Table E1-1 for certain fisheries. Please review the following Victorian-managed fisheries:	REG-EP-020-E1 Physical Presence Rev 3 Table E1 and maps have been updated so that data is consistent and for the Operational Area for Victorian Fisheries. The analysis has been updated to identify the maximum number of vessels that fished in a year within the Operational Area and the maximum days fished in a year within the Operational Area for the period 2011 to 2022.
	• Giant Crab Fishery: Table E1-1 (Appendix E1) states that "*the maximum days per year was 24* ", however 'MAP-REG-EPM-032_A' of Appendix B12 clearly displays a block of 84 days within the Operational Area. There is a block of 24 days, however this occurs within the Active Source Area.	REG-EP-020-E1 Physical Presence Rev 3 Table E1 and maps have been updated so that data is consistent and for the Operational Area for Victorian Fisheries. The analysis has been updated to identify the maximum number of vessels that fished in a year within the Operational Area and the maximum days fished in a year within the Operational Area for the period 2011 to 2022.
	• Rock Lobster Fishery: Table E1-1 (Appendix E1) states that "*the maximum days per year was 316* " however 'MAP-REG-EPM-038_A' in Appendix B12 shows the Operational Area partially overlaps a block of 2,412 days fished. Other notable blocks overlapped by the Operational Area include 1,359, 1,227, and 1,007 days fished.	
	• Multispecies Ocean Fisheries: Unclear what figure or source informed the following statement in Table E1-1 of Appendix E1, "*During 2011 to 2021 the maximum number of vessels that fished within the Operational Area was five and the maximum days per year was 40"*. The years and days fished do not correspond to Figure 15 of the Commercial Fishing Review (Appendix B6).	
	•Wrasse (Ocean) Fishery: Table E1-1 (Appendix E1) states that "the maximum days per year was 100", however, there is no figure in the Commercial Fishing Review (Appendix B6) that displays historical fishing data to substantiate this statement. Figure 20 of Appendix B6 displays grid block numbers but not fishing days.	
	• Octopus Fishery: The stated 'days fished' in Table E1-1 (Appendix E1) correspond to Figure 16 of the Commercial Fishing Review (Appendix B6), however the time frames are different (Appendix E1, 2020-2021; Appendix B6, 2020-2022).	
1.3	***There is not a thorough description of the environment that may affected by the activity – Ambient noise***	
	Issue: An understanding of the ambient soundscape provides relevant environmental context that informs the assessment of underwater sound generated by the activity, but this has not been described	Appendix B8 has been udpated and the data used as appropriate in other Appendices where relevant.
	Reasons: Features of the environment that may influence the activity or the impacts of the activity should be described (**GN1344, Section 3.2**). The ambient soundscape including contributions from existing anthropogenic noise should be identified and described as relevant to the activity location, where data is available (**IP1765, Section 2.2**). The ambient soundscape, as relevant to the area of received sound from the activity, has not been described in the EP.	
1.4	***The EP does not demonstrate that the assessment of underwater sound impacts is appropriate for the nature and scale of the activity, or that the predicted impacts will be acceptable – Zooplankton***	
	Issue: The EP must demonstrate that the detail and rigour applied to the impact and risk assessments are commensurate to the magnitude of impacts and risks arising from the activity (**GL1721, Section 6.3**) and that all impacts and risks will be managed to acceptable levels (**GL1721, Section 8**). The EP does not currently demonstrate that the detail and rigour applied in the assessment of underwater sound impacts to zooplankton are appropriate or if impacts will be acceptable because components of the analysis of the predicted level of impact are not clear.	Removed the paragraph and replaced with a more thorough analysis of the Tang 2014 paper. Further consultation has occurred related to this paragraph and covered in the response to Org ID 241 has already been provided and incorporated into the EP.
	Reasons: A component of the assessment in Appendix E2 states that '*Based on an effect range of 200 m it is estimated ~2% of the zooplankton, including krill, present within the Regia Active Source Area and less than 0.2% of zooplankton present in the Otway bioregion would be impacted per day '*. However, the impact assessment does not explain the method or assumptions applied to obtain these values, which are required to provide necessary context for comparison with other scenarios considered in the assessment, and prediction of the magnitude of impacts to zooplankton.	
	Additional information provided during relevant person consultation (e.g. Org ID 241) should be considered in the assessment and evaluation of potential control options, if information provided by the relevant person to support their objections or claims has merit.	
1.5	***The EP does not demonstrate that the assessment of underwater sound impacts is appropriate for the nature and scale of the activity, or that the predicted impacts will be acceptable – Fish***	

Issue: The EP must demonstrate that the detail and rigour applied to the impact and risk assessments are commensurate to the magnitude of impacts and risks arising from the activity (**GL1721, Section 6.3**) and that all impacts and risks will be managed to acceptable levels (**GL1721, Section 8**). The EP does not currently demonstrate that the detail and rigour applied in the assessment of underwater sound impacts to fish are appropriate or if impacts will be acceptable because the predicted levels of impact to relevant fish species and stocks are not clear.	
Reasons: Specific examples of where the assessment of underwater sound impacts to fish require clarification and/or further assessment include the following:	
a. There are inconsistencies between the commercial fish species identified in the Commercial Fisheries Analysis Report in Appendix B6, those described in Section 4 of Appendix E3, and then assessed in Section 8.1.5 of Appendix E3 and Appendix F3, with the reasons not always explained or apparent. For example, Section 4 of Appendix E3 describes the commercial fish species that may be affected by the activity based on Appendix B6, but has not described some species (e.g. redbait, snapper, or Australian salmon). Section 8.1.5 of Appendix E3 then determines that there will be negligible impacts on the basis that there will be negligible impacts due to particular species not spawning near the Operational Area or because species are highly fecund, but a number of the species identified in Section 4 do not appear to have been considered. A different subset of species are then assessed in Section 3.14 of Appendix F3, for reasons that aren't made clear.	Relevant species have been added to E3, Section 4 to maintain consistency with the Commercial Fishery Analysis document B6 and its updated version in E1. E3, Section 9.14 discusses predicted level of impact as it relates to Commercial Fisheries. This assessment is underpinned by an extensive and detailed initial review (Appendix B8 - Regia MSS Seismic Studies) on seismic sound effects to all key groups including fish and sharks. The information in B8 summarises literature on all parts of the life cycle and across multiple species types as it relates to seismic. E3, Section 9 summarises effects but is not meant to repeat the information in B8. Assessment of impacts on commercial fish are based on two key components (which are in ADDITION to the science outcomes already discussed in B8), i.e., presence of significant spawning aggregations and effects to catch rates in commercial fish species. Outcomes have been derived from ALL of this information. In respect of seismic effects, species group together according to their structural similarities and life-histories hence there is no need to maintain a species x species approach in this section. The previous sections outline clearly how and why species can be assessed in groups. Appendix F3, Chapter 2 - Purpose - clearly states why a subset of species were subject to more extensive assessment. However the Recommendations section in the E documents also explains why some species were subject to more assessment in F3 and identifies them.
b. The assessment in Section 8.1.5 of Appendix E3 states that impacts will be negligible due to species not spawning within the Operational Area, being highly fecund, or due to their serial, broadcast spawning strategies. However, as only some of the relevant target species seem to have been assessed, it is not clear if this justification is appropriate or supported for all fish species. The spatial extent of the relevant stocks and timing of spawning also do not seem to be referenced in the assessment, so the potential for impacts to occur or the magnitude of impacts to the stocks are unclear.	In addition to spawning behaviours and locations, the reasons for effects being assessed as minor (~negligible') includes lack of fishing effort within the Operational Area (OA), which is a direct proxy for importance of the OA to the stocks in question. This section also highlights the extensive assessment done in B8 on effects of marine seismic surveys with a focus on the most relevant studies to commercial fisheries in Victoria. Please refer to response to item [d] for further explanation of how outcomes were derived. Multiple documents B6, B8, E3 and F3 provide a systematic and incrementally more detailed assessment upon which our conclusions are drawn. ** B6 has been updated and the modern content added to E1 - Impact Assessment Physical Presence A further analysis has been added to F3 (see Ch 4 - Temporal Alignment of Key Environmental Values/Sensitivities) to highlight how timing of spawning, and other relevant factors of importance such as feeding aggregations, have been critical to the assessment of impacts and how to mitigate them.
c. Some information does not appear to be accurate, for example, Section 8.1.5 of Appendix E3 states that '*Jack Mackerel spawn off the southeast coast of Australia moving progressively southwards over the summer (AFMA 2023m)* ', but this does not justify that they would not be impacted or should be excluded from further assessment; NOPSEMA understands that Jack Mackerel (*Trachurus declivis*) '*spawns throughout Bass Strait and that separation of Eastern and Western stocks may occur around the Bonney Coast* '[1]. Therefore, spawning Jack Mackerel within the western management unit of the Small Pelagic Fishery may occur in the Otway region.	There are multiple lines of evidence in the EP that provide assurances that there is low likelihood of impacts to Jack Mackerel from the proposed Regia MSS. As a commercial fish of interest it was identified in B6 as a targeted species within the Commonwealth Small Pelagic Fishery (SPF). This document highlights that there is only a very small overlap of SPF grounds with the proposed Regia MSS. When assessing the fishing patterns and stock status both eastern and western stocks are considered sustainable. While there remains uncertainty around detailed stock structures the catches of this species have been small for the previous 5 years. Recent catches of the Western stock in particular have been low and are well below the RBC calculated using the harvest strategy. This level of fishing mortality is unlikely to have substantially reduced spawning biomass (https://www.fish.gov.au/report/346-Common-Jack-Mackerel-2023 - Note this is the same reference given by NOPSEMA). Ward et al (2018) state that the spawning biomass of Jack Mackerel in waters between western Kangaroo Island and south-western Tasmania during summer is relatively small compared to the spawning biomass off the east coast. While there are likely smaller populations spawning across the greater region it remains the case that the main spawning area is Western Bass Strait with further large areas identified off the SW coast of Kangaroo Island. There is no evidence to suggest that significant levels of Jack Mackerel stocks are within and/or spawn in the intended Regia MSS area. We have provided more of this detail in Section 8.1.5.
d. The assessment of impacts to spawning patterns in Section 3.14 of Appendix F3 addresses some of the information gaps noted above for some species, but again contains inconsistencies (e.g. see item [a] above, and silver warehou is now assessed, when blue warehou was previously assessed in Appendix E3). Section 3.14 of Appendix F3 does not clearly articulate the potential magnitude of effects (spatial or temporal) for each of the relevant fish stocks.	Silver Warehou has been renamed to Blue Warehou - this was a typo as no assessment was ever done for silver warehou. Please refer to reply to item [a] in this section for a detailed response. Section 3.14.6 clearly states that ...There are no known critical spawning areas (i.e. species with restricted distribution and/or a relatively large-scale event) for any commercially important fish species within the Regia MSS operational area hence the survey will not have population level impacts on spawning output of any commercially important fish and/or invertebrate species. The information contained in documents B6, B8, E3 and F3 build a case that there are no life-history events of regional significance that can be attributed to the proposed Regia MSS area. It also goes on to say that mitigation can still be achieved through timing of the survey to minimise any potential interactions with major spawning periods. Moreover, this approach is consistent throughout the EP where the most effective timing for the survey is assessed through the lens of spawning patterns/behaviours of all species.
e. The impact assessment has not determined if there may be impacts to the spawning/reproduction and recruitment other protected (non-commercial) fish species listed in Section 4 of Appendix E3, or what the magnitude of these impacts might be.	Extra information has been added to Section 4 to demonstrate the very small likelihood of any impacts.

f. The assessment of impacts to King George Whiting (KGW) in Section 3.12 of Appendix F3 draws conclusions from linear regression analyses undertaken by CGG to test for any correlations between the annual recruitment of KGW to Port Philip Bay and the annual count of seismic surveys across Victorian waters. It is understood from the study by Jenkins et al. (2000; received during relevant person's consultation) that the primary spawning location for KGW is in waters offshore from western Victoria. It is not clear from the information provided in Section 3.12 of Appendix F3 if the regression analysis accounts for seismic survey locations or times that do not overlap with KGW spawning areas or spawning periods, or how this could alter the results or reliability of the analyses.	It would appear that reviewers have not noted that the regression analysis looked at correlations at 2 scales - All of Victorian waters and then only waters within the Otway Basin. The Otway Basin analysis was specifically done to address the question posed here - that spawning is mostly in western offshore waters. The legend for Figure F3-18 has been edited to clarify there are 2 analyses. The available data is too coarse to enable a more detailed examination of this relationship. What we have done here is just show that there have been good recruitment years for KGW even when seismic surveys have been active and/or within the general areas most linked to spawning behaviour.
g. The assessment of change in commercial catch in Section 8.1.5 of Appendix E3 as a result of direct behavioural impacts of seismic surveys to commercial catch rates references a number of studies, some finding no or negligible impacts on catch rates, while others report impacts to catch rates for up to 100 or 200 days after the survey. However, there are no clear conclusions to this part of the assessment that articulate why the predicted level of impact is minor.	This section (now 9.1.4) has been edited to more clearly describe how and why the level of impact was assessed as Minor. There is also more structure to enable the reader to see the links from B6 - Commercial Fisheries Review to E3 - Underwater Sound Fish, Sections 4,to Section 9.1.4 - Change in Commercial Catch. **The Commercial fisheries review was updated in March 2025 and is part of E1 - Impact Assessment Physical presence
Overall, the assessments of impacts to fish species (protected and commercial) in Appendix E3 and Appendix F3 do not clearly and systematically identify, describe or assess relevant species. The assessment of impacts to spawning patterns requires a more consistent and systematic assessment, which sets out the logic for each relevant species screened into the assessment in terms of the described spawning depths, spawning periods and spawning activities and the relevant spatial extents of the stock.	We respectfully disagree and find this conclusion to be a misrepresentation and/or misunderstanding of the EP structure and approach. This review comment has not mentioned the substantial and necessary documentation that precedes the E and F documents and must be read to become sufficiently informed. Nevertheless to provide another layer of clarification we have added an explanatory section at the start of the chapter on Predicted Levels of Impact within each of the E documents. This section articulates how and why the assessment to that stage has been a clear and systematic process to describe and assess all relevant species. Also
In addition, the assessment of underwater sound to fish does not currently consider the potential behavioural disturbance or potential change in distribution of forage/prey fish (e.g. Australian sardines and other sound-sensitive Clupeid species) in the Otway region, to better inform the assessment of impacts to species that rely on these as a key food source.	We have added an explanatory section to E3 - section 8.1.3- Change in Behaviour. This provides published scientific evidence for minimal disturbance to clupeids from the proposed Regia MSS.
1.6 ***The EP does not demonstrate that the assessment of underwater sound impacts is appropriate for the nature and scale of the activity, or that the predicted impacts will be acceptable – Southern rock lobster***	
Issue: The EP must demonstrate that the detail and rigour applied to the impact and risk assessments are commensurate to the magnitude of impacts and risks arising from the activity (**GL1721, Section 6.3**) and that all impacts and risks will be managed to acceptable levels (**GL1721, Section 8**). The EP does not currently demonstrate that the detail and rigour applied in the assessment of underwater sound impacts to southern rock lobster are appropriate or if impacts will be acceptable because the predicted level of impact for all relevant life stages is not clear.	The assessment has not suggested that there will be no interaction between the seismic survey and pre-settlement puerelus. We have suggested that avoiding or moderating seismic exposure during the period when settlement is occurring would reduce any potential seismic effects at this stage. If settlement occurs across June-July-Aug-Sept and the timing of the survey is from Sept-Nov then there will clearly be limited interaction with settling puerelus. We have then provided significant published evidence to show that the scales of mortality that operate on larval, pre-settlement and early-settlement animals are in the region of 80-90% (see 3.5.1 and 3.5.2). With such large mortality schedules the potential impact from the Regia MSS is considered small and relatively immeasurable.
Reasons: The impact assessment provided in Appendix E4 states that '*Puerulus larvae settle onto reef habitat in shallow waters (50 m to the intertidal zone), not present within the operational area*'. The further assessment of impacts in Section 3.5 of Appendix F3 also states that *'Puerulus settle into their preferred benthic habitat from June – September each year so potential seismic effects on the most vulnerable stage of the life cycle can be drastically reduced by scheduling the MSS for outside this window'*. However, the larval phyllosoma stage occurs in offshore waters and puerulus move from offshore waters to coastal habitat prior to settlement. Therefore, it is not accurate to assume that the puerulus stage will be avoided. Therefore, the assessment of impacts to this stage has not been appropriately addressed.	
1.7 ***The EP does not demonstrate that the detail and rigour applied to the assessment of impacts is commensurate to the nature and scale of the activity or the magnitude of impacts arising from the activity – Southern Right Whales***	
Issue: Key values and sensitivities should be thoroughly described using relevant references and information sources (**GL1721, Section 6.3**). The detail and rigour applied to the impact and risk assessments are commensurate to the magnitude of impacts and risks arising from the activity (**GL1721, Section 6.3**). The assessment of underwater sound impacts does not demonstrate that southern right whales are thoroughly described or assessed commensurate to the magnitude of impacts and risks arising from the activity.	CGG respectfully disagrees with this finding. It is not a requirement to repeat published information that is properly referenced in the EP or is reasonably knowable by an expert regulator in an EP to satisfy the description of environment. If it were, EP would become ever larger and endless and this would be contrary to other NOPSEMA wishes to stop this practice. By referring consistently to the National Recovery Plan and other extensive published literature it should be reasonable to assume that CGG is using the informaiton in those document. Further, to require "validation with more recent sources" is an unreasonable expectation as it is more appropriate to wait for publishing entities to go through their validation processes prior to publication. This is a fundamental principle that should not be validated and it is inappropriate for NOPSEMA to make such a request. However, since NOPSEMA have asked, we have included additional information from within previously reference information and established a stronger relationship with the Arthur Rylah Institute. This content has been added into Appendix E7 regarding reproduction, movements, other aggregation areas within the BIA, arrival and departures all taken from DECCA data.
Reasons: Southern right whales are not thoroughly described or evaluated to a level of detail that is appropriate to the nature and scale of the activity and its impacts, or utilising key, relevant and contemporary information. The description and evaluation of southern right whales in Appendix E7 and Appendix F3 provides limited information to describe the population (e.g. structure, abundance, trends) and biology (e.g. reproduction, movements, established eastern population calving aggregations within the extent of the reproduction BIAs). Further, the seasonal distribution and movements of southern right whales has been described at a broad population level based on 'CoA (2012)' but without validation with more recent sources. Location-specific southern right whale monitoring project data (DEECA/Arthur Rylah Institute) may be available to improve understanding of timing and movements of southern right whales within the region (first arrival, peak, departures), but has not been explored or evaluated.	
1.8 ***There is not a thorough description of the environment that may be affected by the activity – First Nations cultural features and values***	
Issue: The EP does not provide a commensurate level of detail to sufficiently describe the First Nations cultural features and values of the environment that may be affected by the activity.	The cultural sensitivities table in Appendix F3, Section 3.16 has been updated, including cause effect pathway and reference to where this is evaluated.

	Reasons: a. The EP (e.g., Appendix F3, Section 3.16) includes reference to "various fish, invertebrate, bird and marine mammals species" that have been identified as First Nations cultural features of the environment that may be affected by the Regia MSS; however, no further detail is provided as to which species this includes. This makes statements such as (Appendix F4, Section 5.5.4) "no cultural features including cultural values, traditions or practices have been identified associated with invertebrates that may be impacted" unverifiable.	The cultural sensitivities table in Appendix F3, Section 3.16 has been updated, along with updates to the relevant impact and risk appendices. These updates are then reflected in Appendix F4.
	b. The EP states that "songlines can extend out to sea country and contain cultural knowledge that is tied to marine plants and animals" and identifies songlines as a cultural feature of the environment that may be affected by the Regia MSS (e.g., Appendix F3, Section 3.16); however, also states that "there are no landforms typical of songlines within the operational area or are anticipated to be impacted by the activity". Additionally, the Sensitive Information Report (i.e., conservation groups full text SIR page 186) contains specific reference to the Koontapool (Southern Right Whale) songline. It is subsequently unclear whether CGG considers that songlines (including the Koontapool songline) may be affected by the Regia MSS.	The stated text has been removed and the cultural sensitivities table in Appendix F3, Section 3.16 updated. As per the table, relevant impact and risk appendices have also been updated.
	c. As outlined previously in RFFWI #1, information provided by relevant persons during consultation in relation to First Nations cultural features and values has not been appropriately incorporated into the description of the environment that may be affected by the activity. As a result, this information has not been considered elsewhere in the EP where it may also be relevant. Specifically:	The cultural sensitivities table in Appendix F3, Section 3.16 has been updated, including cause effect pathway and reference to where this is evaluated.
	o Bunurong Land Council Aboriginal Corporation (BLCAC; Org ID 144) informed CGG of the high cultural significance of the Mornington Peninsula and Point Nepean to Bunurong People (feedback ID 1170, event ID 2371). The description of the environment does not identify this, and no consideration is given to whether the activity could affect the Mornington Peninsula and Point Nepean from a cultural significance perspective within the impact and risk evaluations.	Mornington Peninsula and Point Nepean are included in the cultural sensitivities table in Appendix F3, Section 3.16. As per the table, relevant impact and risk appendices have also been updated.
	o Wadawurrung Traditional Owners Aboriginal Corporation (WTOAC; Org ID 215) informed CGG that the WTOAC Healthy Country Plan includes coastal values (feedback ID 1241, event ID 3674). The description of the environment does not identify this, and no consideration is given to whether the activity could affect the coastal values identified with the WTOAC Healthy Country Plan within the impact and risk evaluations.	Appendix F3, Section 3.16 has been updated to include the cultural values in the WTOAC Country Plan.
	d. The EP contains statements that create uncertainty as to whether CGG has appropriately described all First Nations cultural features and values that may be affected by the activity (including from unplanned events). For example:	The cultural sensitivities table in Appendix F3, Section 3.16 has been updated, including cause effect pathway and reference to where this is evaluated.
	o The Sea Country Protection Plan contains the statement that its process includes identification of cultural heritage stories, songlines and other cultural values ***within the operational area and areas affected by sound.***	Appendix B3, Section 5.4.5 has been updated for clarity.
	o The EP (Appendix E1, Section 4.6) states that "these cultural sites [identified in the Biosis report] ***will not be affected by planned activities associated with the Regia MSS***".	Appendix E1, Section 4.7.2 has been updated to describe cultural features identified, through the Biosis report, consultation and desktop research. The cultural sensitivities table in Appendix F3, Section 3.16 has been updated, including cause effect pathway and reference to where this is evaluated.
	e. Statements within the Sea Country Protection Plan (e.g., "*Activities of the SCPP **will** include*") create uncertainty as to which parts of this process (if any) have already been undertaken as part of relevant person consultation in preparation of the EP to inform the description of cultural features and values that may be affected by the Regia MSS and design of cultural heritage protection measures, and which are intended to be part of the ongoing consultation process with First Nations relevant persons.	Appendix B3, section 5.4.5, has been updated to clarify the SCPP.
	The above are provided as examples only and the issue may not be limited to these. When modifying the EP, CGG should ensure that a commensurate level of detail is used to describe identified First Nations cultural features and values of the environment and clearly demonstrate that all features/values that may be affected by the activity have been identified and included in this description.	Appendix F3, section 3.16.1, has been updated, including reference to citations in the relevant related appendices.
	In relation to the Sea Country Protection Plan, CGG should provide clarification around the intent of the plan and ensure the EP itself demonstrates that consultation with First Nations relevant persons has appropriately informed identification of cultural features and values that may be affected by the activity in preparation of the EP.	Appendix B3, section 5.4.5, has been updated to clarify the SCPP. The cultural sensitivities table in Appendix F3, Section 3.16 has been updated, including cause effect pathway and reference to where this is evaluated.
1.9	***The level of analysis and evaluation is not commensurate to the nature and scale of the activity – First Nations cultural features and values***	
	Issue: The EP does not clearly and consistently evaluate all impact and risk pathways to First Nations cultural features and values as required by regulation 21(5)(6).	An evaluation of all identified (App F3, Section 3.16) impact and risk pathways to First Nations cultural features is included in the relevant impact and risk appendices under 'People and Communities' subsection 'Cultural Features'
	Reasons: a.First Nations cultural features and values that may be affected by the Regia MSS are identified and listed in Appendix F3, Section 3.16.1; however, it is not clearly described which impact/risk pathways have been identified for each feature/value.	The cultural sensitivities table in Appendix F3, Section 3.16 has been updated, including cause effect pathway and reference to where this is evaluated.
	b. Evaluation of impacts and risks to identified First Nations cultural features and values is not carried through the EP consistently. For example, the EP outlines that southern right whales as a cultural value may be at risk from a release of materials or waste overboard (Appendix D1) but does not do the same for all other impact/risk pathways that may affect southern right whales such as (but not limited to) risk of	As per the cultural sensitivities table in Appendix F3, Section 3.16, evaluation of impacts and risks have been carried through to the relevant E (impact) and D (risk) appendices. For example, SRW cultural features are evaluted in Underwater Sound (Marine Mammals) Appendix E7,Fauna Interactions Appendix D2, Accidental release of fuel Appendix D4, Release of materials or waste overboard Appendix D1, Physical Presence Appendix E1
	c. The EP (Section 5.5.7 - Underwater sound – Marine Mammals) states that "impacts [from underwater sound] to cultural features are not predicted", which not consistent with information elsewhere in the EP identifying marine mammals (e.g., SRW and BW and other "various" marine mammals) as cultural features of the environment with clear impact pathways to underwater noise from the activity.	(Note - this refers to Appendix F4, section 5.6.7) Appendix F4 has been reformatted and updated.

	d. The EP (Appendix E1, Section 4.6) states that "although Native Title has not been identified to occur within the Operational Area, it is considered possible that cultural values and sensitivities associated with Eastern Maar and Gunditjmara Native Title determinations adjacent to the Operational Area, may be indirectly affected by planned activities, e.g. through light emissions, and have been assessed elsewhere"; however, Appendix E9 (Impact Assessment – Light Emissions) does not evaluate impacts from light emissions to cultural values and sensitivities associated with Eastern Maar and Gunditjmara Native Title determinations.	Native Title Areas are included in the cultural sensitivities table in Appendix F3, Section 3.16, and the following appendices updated to include evaluations: Light Emissions Appendix E9, Physical Presence Appendix E1, Release of materials or waste overboard Appendix D1.
	e. Predicted levels of risk to cultural features and values do not appear to have been considered consistently through Appendix F4. For example, predicted levels of risk to cultural features and values for accidental release of materials or waste overboard (Appendix F4, Section 5.4.1), collisions with marine fauna (Appendix F4, Section 5.4.2) and accidental release of fuel (Appendix F4, Section 5.4.4) are presented as a level of environmental consequence if the risk were to occur, but IMS (Appendix F4, Section 5.4.3) is presented as not predicted to occur.	Appendix F4 has been reformatted and updated. An evaluation of all identified (App F3, Section 3.16) impact and risk pathways to First Nations cultural features is included in the relevant impact and risk appendices.
	f. The Cumulative Impact Assessment (CIA) scoping tool (Appendix F1, Annex 3) identifies the potential for cumulative impacts to First Nations Peoples' heritage including over both spatial and temporal extents from a number of environmental aspects and states that "further assessment [is] required to determine if impacts are material"; however, there appears to be no further assessment included in Appendix F1 and Appendix F3 states that "due to the absence of direct effects and immeasurable indirect effects, there is no pathway to assess for cumulative impacts" under Cultural Features of the Environment (Section 3.16). This statement is inconsistent with other information presented in the EP identifying the potential for direct cumulative impact pathways to cultural heritage features/values such as from underwater noise to BW and SRW. It is noted that the CIA includes consideration of some environmental receptors that are also identified as First Nations cultural features (such as SRW and BW); however, consideration of cumulative impacts to these receptors in a cultural context is not included. See also OMR item 1.11.	Have added a first nations and cultural heritage section to tables for birds, southern right whale and blue whales in F1.
	The reasons above are provided as examples only and the issue may not be constrained to these. CGG should ensure that all impact and risk pathways to all identified First Nations cultural features and values of the environment that may be affected by the activity are clearly identified, described and evaluated. For receptors that are both biological/physical *and* cultural features of the environment, acknowledgement and consideration of this should be clearly articulated in assessment of all impact and risk pathways to these receptors.	A comprehensive reassessment has been undertaken of the whole EP and modifications made.
1.10	***The level of analysis and evaluation is not commensurate to the nature and scale of the activity – accidental release of fuel***	
	Issue: The risk evaluation for an accidental release of fuel does not align with the description of the activity.	
	Reasons: The EP (Appendix D4) evaluates the risk of an accidental release of 250m^3 MDO although the largest fuel tank is described as 257.4m^3 MDO. It is noted that the EP includes text stating that "Vessel fuel tank inventory will be limited to 250m^3 to align with the modelling report"; however, the EP (e.g., Appendix A2, Section 3.6.1) also contains statements such as "a volume of 250m^3 has been used as the worst-case release because fuel tanks are rarely topped out and hydrostatic pressure and/or ballasting can prevent release of the full inventory", which creates uncertainty as to whether fuel tank inventory will be actively limited for the duration of the activity.	Appendix G1: Added an EPS to the Control Measure Vessel Bunkering Procedure - "No one fuel tank inventory will exceed 250 m3"
	CGG should consider including a clear measure (with appropriate environmental performance standard/s and measurement criteria to monitor compliance) to ensure fuel inventory in the largest tank is limited to 250m^3 for the duration of the activity to ensure alignment with spill modelling recommendations.	Appendix G1: Added an EPS to the Control Measure Vessel Bunkering Procedure - "No one fuel tank inventory will exceed 250 m3"
1.11	***Cumulative impacts have not been appropriately detailed and evaluated, and the level of analysis is not commensurate with the nature and scale of the activity***	
	Issue: The level of analysis applied to the cumulative impact assessment does not provide sufficient detail about the nature and scale of other future projects and activities, or the cumulative impacts arising from them.	CGG believes this finding to have no merit. CGG has clearly considered and properly scoped the future activities that are reasonably knowable and relevant to the consideration of impacts and risks. Notwithstanding, CGG has reassessed this to the best of our knowledge and made modifications were appropriate. If NOPSEMA has more information about these future projects then we'll happily receive it. The nature of future projects is that the impacts and risks are not known nor reasonably quantifiable. It would also be difficult to include all possible future projects that could be conceived of making the premise of all the NOPSEMA findings in this item questionable. We note that NOPSEMA does not publish any guidance on how one could understand what the appropriate "nature and scale" of
	Reasons: a. Reasonably foreseeable future projects and activities identified in Appendix F1 were based on '*a search of projects and activities on the NOPSEMA and DEECA (Vic) Environment Plan websites'*. However, with the exception of the offshore wind declared area that has been noted and scoped out of the assessment, it is unclear if other reasonably foreseeable (non-petroleum/GHG) projects and activities that may be proposed in Commonwealth or State waters have been considered (e.g. referred or approved marine/coastal activities on the DCCEEW or DEECA websites that may be significant and relevant to the assessment).	Information regarding website checks has been added to section 3.2 of F1.
	b. The locations of the various future projects and activities identified in Appendix F1 relative to the Regia MSS should be provided and clearer explanation of which activities are considered in the credible worst-case scenario(s), to provide necessary context for the assumptions made in the temporal and spatial overlap analyses in Section 3.2 and Annex 2 of Appendix F1.	A map of the Amplitude Operational Areas and the ConocoPhillips Australia Operational Areas has been included in Appendix B12 MAP-REG-EPM-169_A. Section 3.1 of Appendix F1 has been updated to refer to this map.
	c. Further information is required regarding the types of sound sources considered for the various projects and activities, as well as assumptions applied regarding sound characteristics and sound exposure regimes (in addition to Annex 3) in order to provide relevant context for assessing potential cumulative impacts from the additive effects of these activities.	Given the nature of sound effects (i.e. temporary and recoverable) information at this level of accuracy is not needed to do a cumulative impact assessment at the level of detail being requested. If the impacts were permanent or significant then this question would have more validity. Notwithstanding, Table F1-1 in Appendix F1 has been updated to include the source sources and peroid of these activities for each future and forseeable project.

d. As described in more detail in OMR item 1.9(f), the Cumulative Impact Assessment scoping tool (Appendix F1, Annex 3) identifies the potential for cumulative impacts to First Nations Peoples' heritage including over both spatial and temporal extents from a number of environmental aspects and states that *'further assessment [is] required to determine if impacts are material'*; however, there is no clear further assessment of this other than statements (i.e., Appendix F3) suggesting there are no pathways to assess for cumulative impacts to First Nations cultural features and values.	Have added a first nations and cultural heritage section to tables for birds, southern right whale and blue whales in F1.
e. Further analysis should be provided for the selected scenario(s), such that the of predicted levels of cumulative impact are clear. For example:	Notwithstanding our objection to this request we have made edits as per the below:
• The assessment of cumulative impacts to commercial fisheries does not articulate which commercial fisheries affected by the Regia MSS will also be affected by other future projects and activities or provide an indication of how much of the fishing activities may be affected and total combined impact.	Overlaps added to F1 Section 5.1.
• The Cumulative Impact Assessment scoping tool (Appendix F1, Annex 3) indicates that there is no cumulative effect pathway for underwater sound on birds (including penguins), but it is not clear if this is supported as the rationale for this in the scoping stage only mentions sound from drilling activities, not from other seismic activities that are currently identified in the region.	More information has been added to Annex 3 in F1 regarding cumulative impacts as a result of seismic surveys relating to birds and little penguins.
• With regards to marine mammals, only cumulative impacts to blue whales and southern right whales are assessed. No assessment is made of the potential cumulative impacts to other marine mammals, despite the Cumulative Impact Assessment scoping tool (Appendix F1, Annex 3) identifying potential for cumulative impacts.	Added Fin, Sei and Pygmy Right Whales to Section 5 of Appendix F1.
· The assessment of cumulative impacts to blue whales and southern right whales states that cumulative impacts are not predicted as each titleholder will be required to undertake their activity in a manner that will not be inconsistent with the Conservation Management Plan / Recovery Plan, such that they do not result in impacts such as injury, auditory impairment, displacement from a foraging area, prevent utilisation of the area. However, measures implemented by each titleholder may be designed to be effective for their own sound effects fields in isolation; without clearer understanding of the sound characteristics, sound fields and potential exposure regimes, it is not clear if this assumption is supported for cumulative (additive) sound fields.	The concern regarding cumulative impacts is acknowledged; however, the underlying premise of the finding appears to conflate the concept of multiple sources of noise with an actual cumulative impact pathway. The assessment concludes there is no credible cumulative impact pathway once all titleholders implement measures to reduce their individual impacts to acceptable levels. If each activity is required to manage chronic effects to below thresholds of concern, then there cannot be a cumulative impact pathway. This is particularly important for species that are transient in the area and only utilise the ensonified zones for parts of the year. The assumption that cumulative impacts may still arise, despite all activities meeting regulatory requirements, does not make sense. The EP remains consistent with the Conservation Management Plan and demonstrates that the residual impacts of the activity do not contribute to unacceptable cumulative risk. The assessment concludes there is no credible cumulative impact pathway once all titleholders implement measures to reduce their individual impacts to acceptable levels. If each activity is managed to prevent injury, impairment, or significant behavioural disturbance—including chronic effects—then the potential for additive impacts is inherently controlled. The assumption that cumulative impacts may still arise, despite all activities meeting regulatory thresholds, does not align with a risk-based assessment approach. The EP remains consistent with the Conservation Management Plan and demonstrates that the residual impacts of the activity do not contribute to unacceptable cumulative risk This is CGG argue if every titleholder in the Otway is managing their activity in accordance with the
Acceptance Criteria 34 (b) - the EP does not demonstrate that the environmental impacts and risks of the activity will be reduced to ALARP because:	
2.1 ***It is unclear from the EP whether the evaluation of impacts and risks has informed the selection of suitable temporal limitations / control measures to reduce the consequence, severity or likelihood of impacts and risks.***	
Issue: There is insufficient information provided in the EP to demonstrate that the selected temporal limitations and control measures adopted for the Regia MSS are ALARP.	CGG disagrees with this finding and framing of the issue as it does not relate to the regulations. Temporal and spatial limitations are not an ALARP consideration. To make this point even clearer, a new section has been added to each impact and risk assessment where elimination and substitution options can be considered prior to and as a scoping mechanism for the subsequent impact and risk assessment. Further, F2 has been entirely replaced with all of the detail CGG has related to the ALARP demonstration and significant educational content on how we do an ALARP assessment.
Reasons: In demonstrating that the impacts and risks from the activity are ALARP, the EP should provide a clear demonstration that the evaluation of impacts and risks has informed the selection of suitable control measures to either reduce the consequence/severity or likelihood (**GL1721, Section 7.3**). The consideration of what control measures are reasonably practicable should be directly informed by a thorough understanding of the extent, severity, duration and uncertainty of predicted impacts (untreated), and thus the benefit of reducing these impacts for different biota (**IP1765, Section 3.5**). The level of rigor required in the ALARP demonstration will be directly influenced by the magnitude of the predicted impacts from acoustic emissions and the sensitivity of the receptors and areas affected; identification and evaluation of control	
It is evident that the Regia MSS is located in an area with numerous seasonal ecological and socio-economic values and sensitivities. *'No discharge of the sound source in January, February, March'* has been selected as an activity limitation, Section 6.1 of the EP provides some context for the January – March exclusion (being largely in response to concerns from relevant stakeholders regarding productivity and biodiversity in the summer months and with reference to EP Annex 1 – Presence / Absence Analysis). However, a clear and rigorous evaluation of the sacrifice vs benefit of the survey timing to reduce impacts has not demonstrated that the selected timing is ALARP (i.e. the "trade-off" and prioritisation of some receptors over others, taking into account the relative sensitivity and predicted impacts/risks to different receptors, not simply	This is an irrelevant finding as it relates to CGG's processes and the ALARP concept. The activity limitation used as an example is nothing to do with ALARP. This was explained in the previous submission and has been further emphasised in this next submission.
2.2 ***The EP does not demonstrate that the method of evaluating ALARP is systematic, applied thoroughly, defensible and reproducible***	
Issue: The EP should demonstrate that the costs of implementing any further control measures to reduce risks would be grossly disproportionate to the benefits to the environment that could be gained. The method of evaluation must be systematic, applied thoroughly, defensible and reproducible (**GL1721, Section 7**). In its current form, it is not evident that the method of evaluating ALARP is applied thoroughly, defensible and reproducible.	CGG disagrees with this finding because the premise of the other finding in Item 2 of the NOPSEMA letter demonstrate a failure to follow CGG's processes for demonstrating ALARP. CGG must acknowledge therefore that NOPSEMA were not able to reproduce our assessment so more detail has been provided and a reassessment completed due to the passage of time and apparent deficiencies raised by NOPSEMA. Appendix F2 has been completely replaced including reassessment of baselines for each impact and risk. This enabled an additional analysis to show that greater sacrifice has been directed at more important pathways.

Reasons: The 'sacrifice ratio' in Appendix F4 and how it is calculated are not clearly explained. Section 4 of Appendix F2 outlines the conceptual parameters and ALARP baselines considered when determining "sacrifice". However, it is unclear how subsequent sacrifice values for controls have been calculated, and the sacrifice statements provided in the ALARP assessment tables do not clearly explain or substantiate the sacrifice scores provided. It is, therefore, unclear how CGG have evaluated the costs of control measures and the environmental benefits.	
2.3 ***There is not a thorough consideration and evaluation of all reasonable control measures***	
Issue: The EP does not demonstrate, through reasoned and supported arguments, that there are no other practicable control measures that could reasonably be taken to reduce impacts and risks any further (**GL1721, Section 7.3**). In addition, information provided during relevant person consultation, including suggestions for reasonable control measures, should be incorporated, considered and evaluated where applicable (**GL1721, Section 7.3**).	GL1721 does not require analysis such "that there are no other practicable control measures" as this would be a never ending exercise. What GL1721 states is that "NOPSEMA will consider...whether all control measures that could reasonably considered are evaluated." CGG attemped to demonstrate that it has reached a point where even further analysis of control measures is grossly disproportionate and therefore ALARP has been demonstrated. Additions have been made to the ALARP analysis to provide this reasoning.
Reasons: The EP (Appendix F2) does not evaluate all mitigation measures that could reasonably be considered, including some measures suggested by relevant persons which should be evaluated in the EP. Examples include:	
Underwater sound: •Further consideration of measures that avoid or reduce the need for seismic sound emissions, consistent with the mitigation hierarchy, such as: oReduction of the spatial extent and duration of the survey by reprocessing existing seismic data that is available for the SAA using modern seismic data processing techniques.	Reprocessing of existing data has already been completed. This resulted in identifying areas that require resurveying due to poor data quality. As this query relates to the overall need for the survey and not demonstrating ALARP or acceptable levels of impact this matter has been addressed in the introduction to the EP.
o Alternative and emerging sound source technologies (in addition to marine vibrosis already assessed) (e.g. eSource, eSeismic).	These have been assessed in Appendix F2 and a commitment to additional modelling of these technologies is also made in B3.
o Reduction of the ASA to the north of the SAA to reduce uncertainty and prevent unnecessary operation of the sound source in areas proximal to sensitive nearshore areas (e.g. southern right whale reproduction area, little penguin and pinniped colonies).	This has been adopted and maps updated. CGG notes that this is an activity limitation and nothing to do with ALARP.
• Shut down of the sound source during line turns to further reduce potential for behavioural disturbance and limit sound accumulation.	Consideration of further activity limitations has been added all relevant chapters and consequential changes made throughout the EP.
• Start-up delay and shut-down procedures for dolphins, pinnipeds and turtles.	Updated G1, G2, E7, and E6.
• Additional and complimentary fauna detection and management options, such as: o Integration of marine fauna observations from other petroleum titleholders and operators in the region, particulalrly in relation to blue whales and SRWs	This is not a control measure, but it is a useful inclusion in the Implementation Strategy related to the Fauna Management Plan. As such this has been included as a responsibility of the Environment Advisor and spelled out in more detail in the management of knowledge process. Best efforts will be made including the offer to share out data, but we can't compel others to share. Updated E7 and B3.
o Incorporation of existing SRW monitoring programmes (e.g. DEECA/Arthur Rylah Institute SRW Monitoring Programme)	This is not a control measure. It relates to information/knowledge and is a useful inclusion in the implementation strategy. Included measure as a responsibility of the Environment Advisor and spelled out in more detail in the management of knowledge process. Best efforts will be made including the offer to share out data, but we can't compel others to share. Updated E7 and B3.
o Coastal observations for SRWs to inform fauna management measures	The intent of this finding has been reframed to fit in CGG's ALARP methodologies. Personnel will be deployed as coastal observers and will follow newly drafted procedures.
o Dedicated support vessel roles and procedures (e.g. "scouting" / "sentry") in marine fauna observations	Added 'Spotter Vessel Procedures' to E7 impact assessment, G1 as a new control measures with assoicated EPS's and measurement criteria.
o Automated camera-based technologies (e.g. WhalePOD, Seiche Smart Visual Detection Systems) to be used in conjunction with other observation and detection techniques, as raised by relevant persons	Explanation provided in F2 why it is not required to assess every possible, conceivable measure.
Commercial fisheries (physical presence / underwater sound): •Spatial and temporal control options to reduce impacts to commercial fisheries, as discussed with relevant persons during consultation. For example: •ASBTIA (preference for April to June);	These are activity limitations. Appendix E1, section 8.1 has been updated to consider this.
• Victorian southern rock lobster fishers (preference for February to April);	These are activity limitations. Appendix E1, section 8.1 has been updated to consider this.
• SETFIA / SSIA / Atlantis Fishing – Spatial controls for both sound source operation and vessel operations in relation to CTS and SGHS fishing activities, and a reasonable buffer for avoidance of orange roughy research program sites from April to October;	Activity limitation added to A2 and Appendix E1, section 8.1.
• Avoidance of MSS with the giant crab spawning period (as stated in Section 3.6.1 of Appendix F3, 'to avoid any potential effects from the MSS this period should be avoided to align with fisheries protections already in place').	Clarified the reasons that this activity limitation is not needed in App F3.
Risks – Unplanned events: • Consideration of visibility conditions during bunkerin operations to reduce the likelihood of hydrocarbon spillage.	This is not a control measures. Further, the visibility conditions during bunkering operations do not change the likelihood of a spill occurring. This is not assessed.
• Use of locally available vessels or equipment (particularly support vessels) if practicable to reduce the likelihood of introduction of IMS species not yet established in Australian waters.	This is not a control measure. Included in the baseline measures as part of the implementation strategy - prequalification assessment.
Any consideration of temporal controls should be considered with regard to OMR item 2.1.	CGG does not understand what a "temporal control" is.
2.4 ***The EP does not demonstrate that measures will be effective in reducing impacts and/or risks for the duration of the EP – General***	
Issue: Enough detail of control measures should be provided to demonstrate that the control measure will be effective in reducing impacts and/or risks for the duration of the EP. The control measures should be evaluated for its functionality, availability, reliability, survivability, independence and compatibility with other control measures. The method of evaluation should also be systematic, applied thoroughly, defensible and reproducible (**GL1721, Section 7**). There are instances throughout the EP where the measures adopted (control measures or activity limitations) to manage environment impacts do not adequately demonstrate their functionality, availability, reliability, survivability, independence and compatibility with other control measures, and/or are evaluated thoroughly, defensible and reproducible.	CGG provided extensive detail on the FARSIC considerations of control measures in previous submissions of the Regia EP to NOPSEMA. This content was dismissed in previous NOPSEMA findings. This is now been reincorporated into the Regia EP submission and the assessment in F2. CGG also notes that the effectiveness of a control measure is often only about one of the FARSIC parameters and an assessment of all of them is neither required nor useful.

Reasons: The EP does not provide adequate detail for some of the measures adopted to demonstrate that they will be effective, and/or some measures are not evaluated thoroughly, defensible and reproducible. Examples include, but may not be limited to: a. Line orientation to minimise impacts to zooplankton in Appendix E2 (i.e. Activity limitation: 'Data acquisition will follow a 130 orientation') is suggested to have been adopted part because 'Richardson et al. (2017) recommends that to reduced impacts to plankton that a seismic survey run perpendicular to prevailing currents, minimising the duration of exposure of plankton to seismic source, as plankton will be moving away from the seismic source not with it'. However, the EP does not demonstrate that this measure is practicable, functional or reliable measure to reduce impacts to zooplankton because (i) the prevailing currents and metocean conditions have not been described; and (ii) the rational for this control is unfounded, as Richardson et al. (2017) suggest that 'Surveys conducted into or across prevailing currents would ensure zooplankton particles would be less likely to be impacted multiple times by a seismic gun. Here the impact on zooplankton were greatest when ocean circulation carried zooplankton particles in the same direction as the seismic survey, as the zooplankton were exposed multiple times to the airgun'.	Regional Oceanography Description has been included in E2 - Section 4. 130 degree orientation activity limitation changed to reflect the reference correctly and make it clearer to navigators what the orientation should be an why. Justification for new one is located in E2 - Section 8.
b. *'If the survey occurs in September, October, November or December, the acquisition lines will be acquired working from the deepest lines first'* and '*If the survey occurs in April, May or June, the acquisition lines will be acquired working from the shallowest lines first'*. It is noted that these activity limitations were adopted to mitigate interactions with Blue Whales as they move towards their summer feeding grounds and to minimise interference with Southern Bluefin Tuna, though the EP also notes their utility in minimising interactions with SRW. However, the functionality and compatibility of these measures in reducing impacts to these receptors is not sufficiently demonstrated, considering the ranges to potential disturbance and noting OMR item 3.1 regarding southern right whales.	Activity limitations do not have a function because they are either complied with or not. Therefore, compatibility with control measures is not a sensible comparison. However, the quality of the activity limitations in properly bounding the activity and reducing impacts/risks to an acceptable level is a valid addition to the demonstration that environmental impacts and riks will be of an acceptable level. Changes have been made to each impact and risk assessment to assess activity limitations.
c. '*Minimise operational activity deeper than 200 m'* (Section 4 of Appendix A2) – Given the scale of concern raised during consultation attributed to activity overlap interfering with Commonwealth trawl operations and key fishing grounds linked to such depths, vague and ambiguous language such as "minimise" does not demonstrate that the measure will effectively limit on-water interactions.	This language has been amended to better align with section 280 of the OPGGSA.
Not enough detail is provided to determine whether the "IMS Risk Assessment Procedure" control measure includes key factors for risk assessments presented in NOPSEMA's Reducing marine pest biosecurity risks through good practice biofouling management information paper.	Further detail on the procedure has been included in D3. "The IMS risk assessment procedure evaluates vessels operational history, inspection results, and biofouling management measures to determine risk levels before mobilisation. If a vessel or facility presents a low biofouling risk, it may proceed with offshore activities, while moderate or high-risk cases may require actions such as cleaning, antifouling treatments, or operational restrictions depending on the findings to ensure all vessels used during the activity have a 'low-risk' rating."
2.5 ***The EP does not demonstrate that measures will be effective in reducing impacts and/or risks for the duration of the EP – Fauna Management Plan***	
Issue: Enough detail of control measures should be provided to demonstrate that the control measure will be effective in reducing impacts and/or risks for the duration of the EP. The control measures should be evaluated for its functionality, availability, reliability, survivability, independence and compatibility with other control measures (**GL1721, Section 7**). Information provided in the EP and the Fauna Management Plan does not demonstrate why measures such as activity limitations, control measures and protection procedures, individually and collectively, will be effective in reducing impacts to marine fauna to ALARP and acceptable levels.	CGG disagrees with this finding. CGG is not required by regulations to "demonstrate that the control measures will be effective in reducing impacts and/or risks for the duration of the EP." It is also not required in these terms by NOPSEMA guidance.
Reasons: The EP and Fauna Management Plan do not demonstrate how fauna management measures, individually and collectively, will function effectively. For example: a.'The sound source will only be discharged in the Pygmy Blue Whale foraging BIA when low numbers of Pygmy Blue Whales and other foraging whales are in the BIA off Otway. The relevant area and definition of 'low numbers' of BWs will be decided by the Whale Expert Panel' – The EP / FMP does not justify why it is appropriate to defer the definition of 'low numbers' or how this relative term will be meaningfully determined. Also, the inclusion of 'other foraging whales' in the pygmy blue whale foraging BIA is ambiguous.	Nothwithstanding the disagreement of this finding the 'low numbers' qualifications have been removed and replace with alternative criteria and wording.
b. Noting that the detection zone / shut down zones (SDZ) for blue whales and southern right whales have been defined as 23 km and 15 km respectively (accounting for predicted distances to both TTS and behavioural disturbance criteria; Section 8 of Appendix E7 and Figure G2-4 of the FMP), the different 10 km and 23 km zones applied to blue whales in the pre-start up and shut-down procedures in the FMP require further detail to explain their effectiveness.	It is surprising that the effectiveness of measures that result in shuting down the sound source needs to be explained as it appears self-evident. The table in Section 9 of Appendix E7 includes a control measure to shut down within 10km of a blue whale to account for behavourial disturbance. This is to ensure the Regia MSS is not inconsistent with the Blue Whale Management Plan. This control measure has been included in the FMP. Appendix E7, Section 8 has been editied to ensure this is clear.
Acceptance Criteria 34(c) - the EP does not demonstrate that the environmental impacts and risks of the activity will be of an acceptable level because:	
3.1 ***The EP does not demonstrate that potential impacts and risks of underwater sound emissions will be of an acceptable level – Southern Right Whales***	
Issue: The assessment of underwater sound impacts to southern right whales does not demonstrate that key areas of uncertainty in impact predictions are identified and addressed, or that impacts will be managed to acceptable levels (**GL1721, Section 8.3**) or that impacts will be reduced to an acceptable level, consistent with the National Recovery Plan for the Southern Right Whale.	CGG commissioned underwater sound experts SLR to provide expert opinion regarding the use of the 160db threshold (see Appendix B7c). The uncertainty of the use of the 160db threshold has been addressed in Appendix E7 and Appendix F3.

	Reasons: a.The EP does not adequately acknowledge or address uncertainty associated with the prediction of behavioural impacts to southern right whales and does not adequately demonstrate that the Regia MSS will be undertaken in a manner that is not inconsistent with the National Recovery Plan for the Southern Right Whale. Appendix B8 outlines the exposure criteria that have been adopted for the assessment of behavioural responses from marine mammals to impulsive sound, which include the interim NMFS 160 dB re 1 µPa (SPL) step function criterion for impulsive sound. However, this criterion does not account for uncertainty regarding behavioural impacts to southern right whale migration (including pregnant females and mother-calf pairs) and reproduction (including calving, nursing, accompanying dependent young).	
	b. Also, noting the high site fidelity displayed by southern right whales and the potential duration that pregnant females and females with calves may be present in the region while the survey is being undertaken, the assessment of acute response thresholds may not adequately consider longer term sustained/repeated exposures and other relevant exposure context (e.g. as per Southall et al. [2021]) are also not clearly described or assessed.	Added Section 3.1.2.2 to Appendix F3 on Chrocic Vs Acute noise exposure.
	c. Appendix F3 states that there is 'an increase in the long-term population trend for southern right whales, albeit slowly for the eastern population, which has been achieved whilst co-existing with marine seismic surveys, noting there has been >80 marine seismic surveys in the last 60 years in the Otway region, including at least 10, 3D surveys in the last 20 years'. The validity of this assessment or relevance of past seismic surveys are unclear, given that the timing of past seismic surveys relative to the seasonal distribution of southern right whales in the region, the proximity of the surveys to reproduction areas and the core aggregation at Logan's Beach, or whether impacts to southern right whales were monitored during or after these surveys, are not presented or evaluated.	This sentence has been deleted
3.2	***The EP does not demonstrate that potential impacts and risks of underwater sound emissions will be of an acceptable level – Pinnipeds***	
	Issue: The assessment of underwater sound impacts does not demonstrate that pinnipeds are thoroughly described or assessed commensurate to the magnitude of impacts and risks arising from the activity (**GL1721, Section 6.3**), or that impacts will be managed to acceptable levels (**GL1721, Section 8.3**).	Updates have been made to address this finding and other (NMFS criteria) to pinnipeds.
	Reasons: a. Section 4 of Appendix E7 provides a description of otariid pinnipeds. However, Long-nosed Fur Seal, an otariid species that may occur in the region, has not been described or assessed, but Southern Elephant Seal, a phocid pinniped species that is unlikely to occur has been described.	Information on Long-nosed Fur Seals has been added to Appendix E7. Information on the Southern Elephant Seal, a phocid pinniped species that is unlikely to occur in the Regia MSS area has been retained as was realised via a stakeholder during stakeholder consultation.
	The assessment of behavioural impacts to the breeding colony of Australian Fur Seals at Deen Maar is based on predicted behavioural disturbance ranges and proximity of the survey relative to the colony and haul out site, but does not adequately describe or assesses impacts to their foraging or impacts to their prey.	Appendix E7 has been updated to include a description and assessment of impacts to Australian Fur Seal foraging and impacts to their prey.
3.3	***The EP does not demonstrate that potential impacts and risks of underwater sound emissions will be of an acceptable level – Little penguins***	
	Issue: The assessment of underwater sound impacts does not demonstrate that little penguins are thoroughly assessed commensurate to the magnitude of impacts and risks arising from the activity (**GL1721, Section 6.3**), or that impacts will be managed to acceptable levels (**GL1721, Section 8.3**).	CGG disagrees with this finding. Given the sparse, varied, and unprotected nature of this species. The amount of study already put into this species and the associated impact assessment is clearly comprehensive and commensurate with the magnitude of impacts. In discussions with NOPSEMA, it appeared that it was the behavioural effects that were of concern and it is not clear why NOPSEMA believes this to be a priority issue. Notwithstanding, CGG has a methodology that encourages us to further explore issues when others believe their may be unacceptable impacts and we have applied that method to these findings.
	Reasons: a. The impact assessments (Appendix E5 and F3) describe the little penguin colonies and populations at Deen Maar, Middle Island and London Bridge. The assessments should also clarify the population status of other past/present little penguin colonies shown in Figure F3-1 and raised by relevant persons during consultation (Person ID 716) (e.g. Gibson Steps, Lawrence Rocks, Griffith Island and Portland Harbour), noting that some but not all of these colonies are included in impact analyses in Appendix F3 (e.g. and Figure F3-4).	Have added additional information in Appendix E5 and F3. Figure F3-1 has been updated to include all colonies from relevant persons.
	b. The impact assessments consider breeding season daily foraging ranges, including those reported for penguins at the London Bridge colony (Berlincourt & Arnould 2015). However, the foraging directions, core foraging areas and influence of environmental conditions on foraging behaviour presented in the same report are also relevant to the impact assessment.	Have added a section on this in F3.
	c. Noting that the two alternative windows for acquisition of the Regia MSS may overlap different life stages for little penguins, the impact assessment does not currently address impacts during both the guard (provisioning) stage and post-guard stage (e.g. Figure F3-2 indicates only the April-June survey period).	Figure F3.2 has been updated to include both survey windows. Discussion has been added addressing impacts during the chick guard life cycle phase.
	d. Analysis in Appendix F3 considers the amount of time and proportion of core foraging habitat that the Regia MSS "seismic area" will intersect with, but does not adequately consider the amount of time and proportion of core foraging habitat that potential behavioural disturbance effects intersect, a concern raised by relevant persons (Person ID 716).	Analysis in Appendix F3, Section 3.4 has been updated to ensure the overlap with the Regia MSS and behavioural disturbance has been addressed.
	e. The impact assessment does not adequately consider indirect effects of sound to the distribution and availability of key prey, which includes sound-sensitive Clupeid fish species (e.g. sardines).	Added a bullet point on this to E5 Section 8, this is also already discussed in F3. We have also added an explanatory section to E3 - section 8.1.3- Change in Behaviour. This provides published scientific evidence for minimal disturbance to clupeids from the proposed Regia MSS.
	f. The assessment currently suggests all the habitat running parallel to the coast out to 20km will provide suitable feeding opportunities, but does not adequately address the issue of energetics, provisioning, fitness and survival that may occur as a result of changes to prey distribution and foraging durations, as raised by relevant persons (Person ID 716).	Paragraph added to Appendix F3 Section 3.4.3 addressing potential impacts to fitness as a result of temporary displacement.
3.4	***Underwater sound model predictions for marine mammals need to consider the best available science and appropriate impact threshold criteria***	

	Issue: The EP must provide evidence that all impacts and risks (in particular to protected matters) will be managed to acceptable levels, and Areas of uncertainty in predictions of impact and risk are identified, acknowledged and addressed (**GL1721, Section 8.3**). The evaluation and prediction of impacts from acoustic emissions should be supported by the best available science (i.e. relevant, applicable, contemporary, peer-reviewed and published by reputable sources) and appropriate impact threshold criteria (**IP1765, Sections 3.3 and 3.4**).	CGG engaged an independent consultant to perform this analysis and compare it to the JASCO modelled results and the new NMFS guidance. We note with interest that the NMFS critiera for behavioural effects to LF cetaceans was again retained at 160 dB. New modelled results and tables have been added into Section 9 of E7, and results have been updated in Section 9.1 where needed. Have also added a paragraph into Section 9.3 stating no new measures were adopted from the SLR assessment.
	On 24 October 2024, the United States' National Marine Fisheries Service (NMFS) published a peer-reviewed update to their Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing. The updates include new information and changes to sound impact threshold, which are likely to alter the predicted effects ranges for marine mammals detailed in the EP.	
	Reasons: The updates to the NMFS technical guidance include changes to the auditory weighting and exposure function parameters for marine mammal hearing groups, as well as thresholds for the onset of auditory injury and temporary threshold shift (TTS) in marine mammal hearing for non-impulsive and impulsive sound sources. The updated NMFS technical guidance includes contemporary published scientific information and thresholds that CGG should consider in the assessment of underwater sound impacts to marine mammals.	
	CGG should review the updated NMFS technical guidance and consider how it may affect the outcomes of the predictive acoustic modelling and impact assessments already undertaken, as well as the selection or effectiveness of control measures.	
3.5	***The EP does not demonstrate that fauna detection methods will be effective in reducing impacts and risks to acceptable levels, or that the effectiveness of fauna detection methods has been thoroughly evaluated.***	
	Issue: The EP must include evidence that all impacts and risks (in particular to protected matters) will be managed to acceptable levels (**GL1721, Section 8.3**) In addition, enough detail of control measures should be provided to demonstrate that the control measure will be effective in reducing impacts and/or risks for the duration of the EP. Control measures should be evaluated for their functionality, availability, reliability, survivability, independence and compatibility with other control measures. The method of evaluation should also be systematic, applied thoroughly, defensible and reproducible (**GL1721, Section 7.3**). The EP does not provide sufficient evidence that the approach to fauna detection (particularly in relation to southern right whales and blue whales) will be effective in reducing impacts and risks to blue whales and southern right whales to an acceptable level, or that the proposed methods or other available options have been evaluated thoroughly, or are defensible and reproducible.	CGG disagrees with the framing of this finding. This issue statement is creating requirements that the regulations and NOPSEMA guidance do not require.
	Reasons: CGG has proposed a combination of visual observations (vessel-based marine fauna observers [MFOs]), passive acoustic monitoring, near real time acoustic detection monitoring, and aerial surveys to ascertain the presence of whales. An Activity Action Zone (AAZ) and Shut Down Zones (SDZs) have been defined based on the maximum effects distances predicted by acoustic modelling, which for blue whales and southern right whales extend up to 23 km and 15 km respectively. CGG proposes to monitor these zones using a number of visual and acoustic detection methods, including passive acoustic monitoring (PAM) and acoustic detection monitoring (ADM) deployments.	
	Visual observations proposed to be undertaken by MFOs on the survey vessel during daylight hours are described in the EP as being effective up to ~5km in optimal conditions, and the PAM system to be used on the survey vessel is described as having a detection distance ~10 km from the vessel. The EP further states that 24-hour PAM and ADM will be the primary whale detection methods at night and during low visibility conditions.	
	Noting the potential nature and scale of impacts arising from the activity, and the criticality of effective fauna detection to inform impact management, the effectiveness of the proposed detection methods (individually and collectively) has not been demonstrated in the EP because: •Appendix F5 (Marine Mammal Detection Technology Assessment) presents the findings of a preliminary desktop assessment of available whale detection technologies. Appendix F5 considers aspects including availability, practicality of implementation, possible safety concerns, and some high-level information on past performance for each of the technologies. However, the effectiveness and capability of detection technologies in the specific circumstances of the Regia MSS and its predicted impacts are not evaluated in sufficient detail within Appendix F5. It is also unclear how information in Appendix F5 has been considered or what further evaluation has since been undertaken by CGG in determining the whale detection methods proposed in Section 8 of Appendix E7. Generally, the high-level ALARP assessments of marine fauna detection options presented in Appendix F2 (ALARP assessment) are not thorough and are sometimes inconsistent with options described as practicable in Appendix F5. For example, Appendix F5 describes practicable and complimentary acoustic detection solutions, including the potential use of supplementary PAM vessels, and consideration of a hybrid acoustic monitoring array using a combination of tethered buoys in the shallower waters and unmanned surface vessels or underwater gliders in deeper waters. However, these approaches have either not been considered or are not thoroughly evaluated in Appendix F2.	This finding represents a misunderstanding of the role of Appendix F5 and fails to recognise that an ALARP analysis does not need to consider every conceivable control measure to complete a demonstration. The number of measures considered in an ALARP assessment is no indication of its thoroughness. Appendix F2 has been replaced and now has further clarified the role of Appendix F5 and more detail has been included in the demonstration being made that the adopted control measures are already reducing impacts/risks to grossly disproportionate levels. This includes graphical representations of the costs already incurred and the significant reductions in impact/risk already acheived. Other content provided to NOPSEMA in Rev 1, removed following NOPSEMA's feedback, has been returned to Appendix F2.
	• It is not appropriate for the EP to defer parts of the detection strategy (e.g. design and layout of the ADM systems, frequency and design of aerial surveys) to the Whale Expert Panel, without giving details for their fundamental features, e.g. objectives and criteria that would need to be met to achieve the objectives of the broader detection strategy ensure it will be effective.	CGG disagrees with the finding. It is fundamental premise of the entire regime that systems can be relied upon to defer elements of environmental management beyond the point of acceptance. For example, the IMS risk assessment procedure, the vessel selection process, management systems for change and knowledge. Notwithstanding, Section 9.3.5 of Appendix E7 has been updated to ensure the panel is an advisory role and not decision makers in detection strategy. Appendix G2 has been updated to include information on ADM locations so as panel are not making this decision but providing advice to CGG to help inform the decision.

	· As the specific PAM and ADM systems to be used are not specified in the EP or not known, of the EP does not provide confidence that methods that CGG eventually select for acoustically detecting low-frequency species such as blue whales/pygmy blue whales and southern right whales will be effective over the proposed distances. Only general statements of detection distance ranges for unspecified systems are provided in Appendix E7 and Figure G2-2. There is inadequate information or consideration of relevant intrinsic factors such as technical information (e.g. hydrophone operating frequencies, appropriateness of detection and classification software), documentation of the efficacy of their detection capabilities (e.g. range, bearing, detection rates for key species of interest, or the influence of ambient noise levels, seismic signals and low-frequency mooring self-noise on the detection capabilities), or the adequacy of data streaming (range and timeframes) to inform real time / near-real time decision making.	Sercel have provided a confidential technical memo document - Appendix C6.
	· Section 8 of Appendix E7 states that a single ADM unit will be tested to assess the efficacy of the system, including the performance of data streaming (e.g. transmission range to onshore monitoring station), information management and delivery systems. There is no further information on the timing or status of this trial. The information from CGG's proposed trial is fundamental to the evaluation of the effectiveness of the acoustic monitoring approach, but no details on the trial, such as its objectives and assessment methods, including as they relate to requirements of system performance to ensure impacts will be acceptable, are presented. If there have been other system efficacy trials undertaken elsewhere in the world that may be relevant to low-	An update on the trail (which is not a petroleum activity) is provided in the resubmission cover letter.
	• The efficacy of the proposed towed PAM system(s) also requires further information to demonstrate its effectiveness in detecting low-frequency species such as blue whales and southern right whales, including the range of detection for these species during seismic surveys. It is noted that PAM technologies being considered by CGG for the Regia MSS have been trialled in other locations around the world and utilised during other marine seismic surveys in Australian waters (including for the detection of blue whales), which may provide CGG with further information with which	PAM TECHNICAL REPORT INFORMATION - Appendix C6 is a confidential technical report which has been added to the EP to provide additional information regarding towed and ADM PAM systems being considered for the Regia MSS.
	The overall fauna detection strategy (i.e. all acoustic and visual techniques, individually and collectively) requires further consideration of the relevant intrinsic and extrinsic factors to understand how effective the monitoring techniques will be to inform mitigation decisions, and demonstrate that impacts will be reduced to an acceptable level.	Sercel have provided a confidential technical memo document - Appendix C6.
	The activity limitation '*operate the sound source at low power during line turns and if transiting between survey lines anywhere in the operational area'* is inconsistent with '*the sound source cannot be active in the operational area outside of the active source area'* in the definition of the OA in Section 3.4 of Appendix A2.	The activity limitation has been edited to restrict low power operations to the Mitigation Source Area, Active Source Area, and Survey Acquisition Area which is consitent with the definitions.
	The SAA in Appendix B12 (MAP 031_B) appears to extend into water depths shallower than the 50m depth contour and outside of the ASA (see Appendix B12, MAP 031_B).	Maps updated.
	The map legends in Appendix B12 refer to a 'Previous Active Source Area', but NOPSEMA understands from the Activity Description in Appendix A2 that the ASA boundary is still current.	Maps updated.
	Section 3.2.1 of Appendix A2 states that '*the seismic and support vessels will conduct a few days of operational movements to deploy and test the equipment, which may occur within the OA or adjacent to it'*. It is not clear if the equipment testing described here includes testing of the sound source or not, noting that the area definitions in Section 3.4 state that the sound source cannot be active outside the SAA or ASA. The definition of the OA in Section 3.4 also implies that equipment deployment and recovery activities will occur within the OA, not 'adjacent' to it. Additionally, Table F2-10 rejects adoption of a measure to restrict deployment and retrieval of seismic gear to the OA and suggests CGG will deploy equipment en-route to the OA.	Updates have been made to A2 and F2 to clarify that the vessel movements outside of the Operational Area are not part of the petroleum activity and restricting them as such provides no environmental benefit and increases safety risks. Updates to A2 make it clear that testing of the sound source may only occur within the Active Source Area.
	Please also note that RFFWI Item 1.1 identified that the EP intermittently references a 'survey area' and it was unclear what area this term referred to. Although CGG has addressed some of these, there are still a few instances where the EP documents refer to a Regia 'survey area' with no explanation of whether this refers to the OA, ASA, SAA or if it is a collective term for all of these.	Checked and any retained references would mean all survey areas.
	With regards to survey timing, activity limitations provided in Section 4 of Appendix A2 infer that the survey may take place in either 'April, May or June' or in 'September, October, November or December', but there are examples in other appendices of the EP where the survey timing is not consistent with this (e.g. Section 3.14 of Appendix F3 which indicates survey timing is April-June and September-November). Additionally, EP Section 6 states that "The Regia MSS provided for in this EP is proposed to be carried out as per the Description of the Activity found in Appendix A2. This allows for the activity to be undertaken during a 5-year period, between 1 April 2024 (subject to acceptance of this EP by NOPSEMA) and 31 December 2028'; however, Appendix A2 (Table A2-1) describes the latest finish date for operations as the 31st of October 2028.	The dates have been updated to reflect the passage of time. The EP and all Appendicies checked. However, again, Appendix A2 is the single source of truth and is the document CGG expects to have compliance enforced against. If the impact/risk assessments include additional months it is artifact of the process and would mean a broader assessment than permission is being sought for - so this shouldn't be an issue.
1.2	***The EP does not demonstrate that the level of analysis and evaluation is commensurate with the nature and scale of the activity and the severity of individual impacts and risks – Physical presence – Commercial fishing***	
	Issue: The EP does not demonstrate that level of analysis and evaluation undertaken to assess the impacts to key commercial fisheries is commensurate to the nature and scale of the activity or the magnitude of impacts arising from the activity (**GL1721, Section 6.3**). The EP currently identifies the key Commonwealth and State fisheries that the survey is most likely to interact with, but the current level of analysis does not provide an indication of the proportion of key fishing grounds that could be affected or consider the fisheries' capacities to tolerate the predicted level of displacement / relocate to alternative viable areas. Therefore, the magnitude of potential impacts are not adequately predicted.	Additional analysis and evaluation has been undertaken to assess the impacts to key commercial fisheries and is provided in REG-EP-020-E1 Physical Presence Rev 3 Table E1-1 and Table E1-2. The analysis and evaluation has where relevant provides the proportion of key fishing grounds that could be affected or consider the fisheries' capacities to tolerate the predicted level of displacement / relocate to alternative viable areas.

	Further, between the defined acceptable levels at the activity level for biological/ecological values (which primarily reflect the ESD principle for the conservation of biological diversity and ecological integrity) and the defined acceptable levels at the aspect level, the EP does not demonstrate that acceptable levels have been informed by relevant policy documents, guidance, wildlife conservation plans, recovery plans, management plans, gazettal instruments under the EPBC Act, conservation advices, marine bioregional plans or other relevant documents	The CGG process included developing Appendix B2 prior to completing the impact and risk assessments. This is clearly described in the EP and shows that all legislative requirements and EPBC materials have been included in the assessment. The section prior to 'defining acceptable levels' in each impact and risk assessment is 'relevant legislative and other requirements' which summarises anything relevant arising from Appendix B2 that should be taken forward into the impact / risk assessment. Further, there is a specific criteria for CGG to assess whether the activity (action) is consistent with the EPBC Act. This content was in the relevant impact / risk assessment and was relocated to Appendix F4 after NOPSEMA's last findings. Now, CGG has returned that content to the relevant impact / risk assessment. CGG had clearly taken into account this material.
	In regard to First Nations cultural heritage, it is not clear what, policies, documents or information received through consultation with relevant persons may be relevant to defining more appropriate and meaningful acceptable levels of impact. For example: •Appendix F4 provides an activity-level defined acceptable level of 'Impacts and risks to cultural features including cultural values, traditions, or practices, will be temporary / reversible, small scale, and/or low intensity'. It is not clear what relevant information was considered by CGG when defining this level of impact as being tolerable to First Nations peoples. Additionally, this appears to allow for impacts and risks to First Nations Cultural features including cultural values, traditions or practices to be permanent (i.e., not temporary or reversible) as long as they are 'small scale' or 'low intensity'. Again, it is not clear if this would be tolerable or acceptable to First Nations peoples.	The return of this content to the impact / risk assessments should assist in showing NOPSEMA what has been considered in relation to First Nations heritage.
	When addressing the above issue, CGG should also review parts of the EP that compare predicted levels of impact with the defined acceptable levels (i.e., Section 9 of each Appendix D and E, and Appendix F4) to ensure they clearly relate to the defined acceptable levels and provide clear comparisons with the predicted levels of impact made in the impact assessments.	Each assessment has had a new section 10 added as the demonstration that impacts and risks are of an acceptable level.
	This letter point should be read in conjunction with OMR item 4.1 regarding EPOs linked to acceptable levels.	
3.6	***The EP does not clearly demonstrate that the proposed activity is not inconsistent with a management plan in operation for a Commonwealth reserve (e.g. an Australian Marine Park)***	
	Issue: The EP does not clearly demonstrate that the proposed activity is not inconsistent with relevant management plans for Australian Marine Parks (AMPs).	Updated Table in F4, and identification table of impact pathways in annex of EP document
	Reasons: The EP must demonstrate that the proposed activity is not inconsistent with a management plan in operation for an AMP. It is noted that Appendix F4(Section 5.8) states 'It respects the management plans in place for Commonwealth reserves, such as Australian Marine Parks, and upholds the Australian IUCNReserve Management Principles. It shows that the activity will not have unacceptable impacts on the values of these protected areas', further justification should be provided to clearly identifies and links relevant AMP values, the predicted levels of impact to those values, and demonstrate how the predicted levels of impact are not inconsistent with the relevant marine park management plan objectives.	
3.7	**Areas of uncertainty in predictions of impact and risk are not correctly identified, acknowledged and addressed – Commercial fisheries**	
	Issue: The EP does not demonstrate that that the environmental impacts and risks of the activity to commercial fisheries will be of an acceptable level if all areas of uncertainty in predictions of impact and risk are not correctly identified, acknowledged and addressed (**GL1721, Section 8**).	REG-EP-020-E1 Physical Presence Rev 3 Section 8.3 Assessment of Uncertainty has been updated.
	Reasons: In Section 8.3 of Appendix E1, the EP states there is low uncertainty in the assessment of impacts associated with the physical presence of the survey vessel to the functions, interests and activities of other marine users. It provides a series of justifications and measures to how uncertainty will remain low during the activity. Absent from consideration, is the uncertainty linked to data underpinning the commercial fishing review (Appendix B6) which informs impact evaluation. Uncertainty of the commercial fisheries historical catch and effort data is evident in the following forms:	REG-EP-020-E1 Physical Presence Rev 3 Section 8.3 Assessment of Uncertainty has been updated.
	• Data confidential blocks / maximum area fished: Due to privacy constraints, relative fishing intensity is unknown when four or less operators have actively fished in a designated block in Commonwealth-managed fisheries. CGG's treatment of these blocks suggests that these blocks represent low fishing activity (see Table E1-1 of Appendix E1). A data confidential block, in fact, may correspond to high, medium or low fishing intensity for up to four operators in each block. Thus, there is uncertainty in the degree of impact the seismic activity may have on the commercial fisheries with overlap of this nature (e.g., Eastern Tuna and Billfish Fishery, Shark Hook sub-sector Fishery, and Danish Seine sub-sector Fishery). The coarse resolution of the blocks (111 x 111 km blocks) adds to the uncertainty in predicting potential for interference.	REG-EP-020-E1 Physical Presence Rev 3 Table E1-1 has been updated to consider that fishing intensity for a data confidential block is not known and may correspond to high, medium or low fishing intensity for up to four operators in each block. Further analysis has also been undertaken to identify the likelihood of these confidential blocks having high, medium or low fishing intensity.
	• Historical data: The data utilised to inform the physical presence impact assessment (Appendix E1) is not always up-to-date (e.g., up to five years old for Commonwealth-managed fisheries). Historical data may provide an indication of possible future fishing locations and indicative effort; however it is not without predictive uncertainty, especially where it has utilised data that is no longer contemporary.	REG-EP-020-E1 Physical Presence Rev 3 has been updated based on contemporary historical data up to the 2023/2024 season (2010 – 2023) for the Commonwealth fisheries and 2011 to 2022 data for the Victorian fisheries.
	• The titleholder has introduced further uncertainty in the mismatch of area boundaries used to detail historical fishing activity (Commercial Fishing Review; Appendix B6) and later evaluate (Appendix E1) physical presence impacts to commercial fisheries. This is discussed further in OMR # 1.7 (Acceptance criteria 34(a)).	As detailed in OMR # 1.7 (Acceptance criteria 34(a)) REG-EP-020-E1 Physical Presence Rev 3 and associated maps and areas of overlap have been updated such that the impact assessment is based on the Operational Area.

	In acknowledging all possible forms of uncertainty, CGG could reconsider the uncertainty evaluation for the assessment of impacts associated with physical presence (Section 8.3 of Appendix E1), with due consideration to the uncertainty in the data underpinning the commercial fishing review. In addition, CGG could distinguish its evaluation of fisheries where there is activity overlap with a data confidential block from fisheries where there is activity overlap with 'known' low fishing intensity (i.e., on review of Table E1-1 of Appendix E1, each scenario is treated the same).	REG-EP-020-E1 Physical Presence Rev 3 Table E1-1 has been updated to detail where the Operational Area overlaps with a data confidential block from areas where there is 'known' low, medium, high fishing intensity.
Acceptance Criteria 34(d) - the EP does not provide for appropriate EPOs, environmental performance standards and/or measurement criteria because:		
4.1	***The EP does not provide appropriate environmental performance outcomes (EPOs) linked to acceptable levels of environmental impact***	
	Issue: Environmental performance outcomes (EPOs) should be linked to acceptable levels of environmental impact (**GL1721, Section 9.3**), where an environmental impact is defined as a change to the environment (regulation 5) and an 'acceptable level' is the specified amount of environmental impact and risk that an activity may have which is tolerable (**GN1344, Section 3.5**). EPOs should also address the specific environmental features or receptors that may be affected by the activity, and reflect levels of environmental performance equal to or better than the defined acceptable level of environmental impact for those features or receptors (**GN1344, Section 3.7**). Currently, some EPOs presented in Appendix G1 of the EP are not outcomes linked to acceptable levels of environmental impact, or do not reflect levels of environmental performance equal to or better than the defined acceptable level of environmental impact to environmental features or receptors.	CGG disagrees with this finding. The tables provided clearly linked the EPO to the defined acceptable level. Notwithstanding there is always improvement that can be made to these statements so we have gone back to first principles of what an outcome statement should be and applied a consistent phrasing to have another attempt at satisfying NOPSEMA.
	Reasons: Some EPOs provide clear and appropriate environmental outcomes linked to acceptable levels of environmental impact, for example, '*No death or injury to fauna, including listed threatened or migratory species, from the activity'* in relation to the risk of collisions with marine fauna. However, a number of other EPOs do not reflect appropriate environmental outcomes linked to acceptable levels of environmental impact. Instead, many EPOs appear to be statements of performance that are more appropriate as environmental performance standards (EPSs) for control measures (or activity limitations). For example:	These statements were adopted as EPO's following feedback from NOPSEMA. CGG agrees that they are not EPS and disagrees that they are performance standards. All activity limitaition are now covered in the environmental compliance register and monitored in real-time and in daily reports. The statements have been removed as EPO's. CGG recognises the need to have activity-level EPO's aligned with the activity-level defined acceptable levels. Therefore, new EPO's have been drafted that cover the activity-level defined acceptable levels.
	• 'No discharge of the sound source in January, February, or March'	
	• 'Sound source shutdown when any cetacean is observed within 500 m of the sound source'	
	• 'The sound source will not remain stationary at full power at any time'	
	• 'No vessel movements within 5 km of the Twelve Apostles State Marine Park'	
	• 'The sound source will not remain stationary at full power at any time'	
	• 'The community and relevant persons are informed about the operational details of the activity and relevant persons objections and claims are promptly assessed'	
	• 'Maintain arrangements to respond to an unplanned release of fuel in accordance with the OPEP'	
	In addition, some EPOs do not reflect either the activity-level or aspect-level defined acceptable levels. For example, the EPO for plankton, zooplankton and krill in Appendix G1 is '*The sound source will not remain stationary at full power at any time'*, which is not clearly linked to the aspect-level acceptable level '*Plankton communities should not be exposed to peak sound levels of >210dB SEL $_{cum24hr}$ for longer than 12 hours'* or the activity-level biological/ecological acceptable levels '*Impacts and risks to* [biological/ecological] *features will be temporary / reversible, small scale, and/or low intensity damage to the overall health, diversity, or functioning of the ecosystem'*. This example is representative of a broader issue with the EPO's and the defined acceptable levels in the EP, and this latter point should be read in conjunction with OMR item 2.5.	All EPO's and defined acceptable levels have been reviewed. Some have been retained and some additions have been made. A 'rationale' column has been added to each of the defined acceptable levels and EPO statements to explain why they are appropriate.
	The EPOs should be clearly linked to and address all of the identified impacts and risks. The EPOs should be linked to, equivalent to or better than the acceptable level(s) of environmental impact and risk from an activity. Current EPOs that provide EPS-type statements of performance may be appropriate as EPSs for adopted control measures.	The table linking an EPO to one or more defined acceptable levels has been retained and the justification column added to explain why each EPO is appropriate.
4.2	***The EP does not clearly provide EPOs for impacts and risks to First Nations cultural features and values***	
	Issue: The EP does not demonstrate that it provides for appropriate environmental performance outcomes (EPOs) as the EP does not clearly set levels of performance for impacts and risks to First Nations cultural features and values.	Social, cultural and economic features EPO has been adopted.
	Reason: The EP does not include EPOs that clearly address impacts and risks to First Nations cultural features and values. As a result of this, the EP does not demonstrate that there is a measurable level of performance that will be met during this activity and subsequently does not provide confidence that the activity is able to be managed to ensure that all impacts and risks to First Nations cultural features and values are managed to acceptable levels.	Social, cultural and economic features EPO has been adopted.
4.3	***Some EPSs cannot be easily monitored for compliance***	
	Issue: The EP does not demonstrate that it provides clear EPSs and measurement criteria that can be easily monitored for compliance and demonstrate that the desired environmental performance is being met (**GL1721, Section 9.3**).	
	Reason: Some EPSs/MC do not demonstrate that the desired environmental performance is being met because they provide for monitoring whether data has been collected, or a person has undertaken a task, rather than whether that data itself demonstrates compliance with an environmental mitigation measure. For example, while compliance with EPS '[The Quality Control and Reporting Representative will] *Always monitor the location and planned activities of the contracted vessels in accordance with the Sail Line Plan'* can be confirmed through the presence of continuous vessel tracking data records, the presence of this data does not directly demonstrate that vessels have complied with measures outlined in the Sail Line Plan.	All EPS's have been reviewed and we have revised some EPSs to clearly describe the required level of environmental performance, and updated some measurement criteria to ensure they demonstrate whether that performance has been achieved.

CGG should consider how to best modify the EP to demonstrate that all commitments within the EP (particularly key measures to reduce impacts and risks from the activity to ALARP and acceptable levels) have appropriate arrangements to ensure they are implemented effectively and monitored for compliance throughout the life of the EP and during the activity. This could be achieved by including additional EPSs that provide clear and specific levels of performance for key mitigation measures such as activity limitations and/or including more robust and detailed assurance measures for monitoring compliance with the whole EP through measures within the Environmental Management System. This item should be considered in conjunction with OMR items 5.1 and 5.2.	CGG has expanded the scope of the environemntal compliance register and the frequency of audits.
Acceptance Criteria 34(e) - the EP does not include an appropriate implementation strategy and/or monitoring, recording and reporting arrangements because:	
5.1 ***There are not appropriate assurance mechanisms – Environmental Compliance Register***	
Issue: The ECR mechanism does not demonstrate that the auditing process will provide for sufficient review of the implementation strategy or other commitments in the EP if they are not included as performance measures.	
Reasons: The implementation strategy describes development of an ECR which will include controls, performance standards, performance outcomes and measurement criteria and monitor compliance with these; however, it does not appear to provide for monitoring compliance with the activity description, activity limitations or other commitments in the EP that aren't reflected as control measures, EPOs, EPSs or MC. Additionally, the EPS related to implementing environmental performance audits (Appendix G1, Appendices PDF page 1845) provides for the audit of EPOs and EPSs only. This is of particular importance if the activity limitations outlined in Section 4 of Appendix A2, or other specific measures captured within the Sail Line Plan, which are fundamental to reducing impacts and risks to a range of receptors, are not captured in an EPS. See also OMR items 4.3 and 5.2(b).	Appendix B3 Table B3-3 Roles and Repsonsibilities and Section 5.6.2 Recording of Environmental Performance updated to detail that the Environmental Conformance Register (ECR) is to include all EP commitments.
5.2 ***There are not appropriate assurance mechanisms – Other***	
Issue: The EP does not demonstrate that the assurance mechanisms for the EP (including audit, review and management of non-conformance) are appropriate (**GL1721, Section 10.3**).	
Reasons: a. When considering the maximum of 60 days acquisition and 90 days operations: i. The commencement audit being undertaken "once within the first 30 day of the survey starting" (Appendix B3, Section 5.6.3) does not appear appropriate as an assurance mechanism, considering acquisition could potentially be halfway completed if conducted at the end of the 30-day period.	Commitment updated to within 7 days of the survey starting.
ii. The EP does not demonstrate that a monthly environmental performance audit (as outlined in an EPS on Appendices PDF Page 1845) is sufficient as an assurance mechanism, considering the importance and in some cases complexity of key performance measures that will require ongoing monitoring to effectively ensure compliance.	Frequency changed to weekly and expanded the scope to include activity limitations and the implementation strategy. Also added the following EPS's to the Environment Officer (1) Continually monitor daily reports, weekly audit results, and incident reports, for ongoing compliance of the activity with the environmental performance outcomes and standards in this document. (2) Immediately initiate an inspection and/or corrective action upon identification of a non-compliance with any environmental performance outcome or standard.
b. The commencement audit outlined in Appendix B3 Section 5.6.3 provides for checking conformance with regulatory requirements detailed in the ECR rather than the whole EP (see also OMR item 5.1).	The ECR wil now include all commitments made in the EP.
c. Some assurance measures are high-level and lack detail. For example: i. Section 5.6.3 Appendix B3 outlines that the commencement audit will "ensure that the relevant documents that support implementation of the management and mitigation measures in the EP are accessible and have been communicated to the contractor and vessel crew" but does not specify which documents this includes.	Appendices listed.
ii. Section 5.6.3 Appendix B3 outlines a daily report that will be reviewed at least weekly or on request, but it is unclear what information will be recorded in the daily reports for review.	Clarity provided in the managemnet of knowledge section.
iii. Environmental Management System EPS 'Conduct daily informal HSE checks of vessel operations to ensure that the EP commitments are implemented' does not provide any further detail as to what these checks will include. Use of the word "informal" also creates uncertainty as to whether non-compliances would be effectively captured and actioned through this process.	This was an EPS for the Technical Operations Manager. It has been amended to "Continually monitor vessel HSE performance..."
d. Section 5.4.6 of the Implementation Strategy in Appendix B3 states that CGG proposes to attempt sound source verification using the hydrophones in the towed streamers, as a specific measure to ensure effectiveness of control measures. However, as noted by CGG, the method is unreliable. Therefore, it is unclear why CGG propose attempting such a verification and the approach is not an appropriate assurance mechanism.	This section has been removed as verification activities with some uncertainty about their effectiveness shouldn't be attempted.
e. Measures should be incorporated into the EP to ensure that relevant spatial data (e.g., survey boundaries, spatial exclusions, BIAs) are accurately communicated to the survey contractor, is incorporated into the survey vessel and support vessel systems.	Added to the ASOP requirements.
f. The EP includes the statement "where more immediacy is required, non-compliances will be communicated to relevant personnel immediately and responded to as soon as possible" and it is unclear under which circumstances CGG may consider it appropriate for a non-compliance to not be communicated responded to as soon as possible.	This sentence has been removed.
g. The EP states that the performance of key equipment as described in this EP (i.e., oil-in-water separator) will be checked to ensure ongoing reduction of risks and impacts to ALARP but does not specify which equipment besides the oil-in-water separator will be checked and at what frequency.	This is not requirement for the full list to be provided so a more general commitment has been made to ensure all equipment that ends up being used is covered rather than limiting it to a specific list which might inadvertently miss some quipment that we later adopt or may have missed.
5.3 ***Levels of competency for persons responsible for implementing critical control measures have not been clearly described***	

	Issue: The EP should describe how role awareness, training and competency will be maintained for the duration of the activity, for all personnel and contractors with responsibilities under the EP. Particular emphasis should be placed on describing training and competency for those persons who are responsible for implementing critical control measures. Doing so will help demonstrate that those control measures can be effectively implemented (**GN1344, Section 3.10**).	Appendix B3 Section 5.5.2. Competency and Ongoing Awareness updated with minimum competency requirements and personnel numbers.
	The effectiveness of fauna detection measures will be influenced by the training and competency of the personnel implementing them. Consideration should be given to minimum competency requirements and personnel numbers relative to expected level of fauna encounters and the measures being applied, e.g. passive acoustic monitoring or visual observations (**IP1765, Section 3.5**).	
	The required personnel numbers and levels of competency for key roles have not been adequately defined in the EP.	
	Reason: The level of training and competency and personnel numbers required for MFOs, PAM and ADM operators, and the Whale Expert Panel is critical for the successful implementation of fauna detection management measures. The required personnel numbers and levels of competency for these roles have not been defined in the EP.	
Have		
5.4	***There is not an appropriate OPEP***	
	Issue: The OPEP does not demonstrate that it is appropriate for the nature and scale of the activity (**GL1721, Section 10.3**).	Changes made to address these findings.
	Reasons: a.The OPEP states that it is based on a different and more volatile/less persistent fuel type (MGO – for example, Appendix G3 Section 7) than what the EP describes will be used in the activity (MDO – for example, Appendix D4 Section 2.1).	Aligned G3 with D4, Marine Diesel Oil (MDO).
	b. The OPEP defines a Level 2 spill as a loss of 286m³, which is larger than the worst-case spill scenario defined for the Regia MSS.	Redefined the CGG levels to align with the previous paragraphs as per NATPLAN.
	c. The OPEP does not provide sufficient detail regarding notifications that will be provided in the event of a spill. For example: The OPEP states that "Further reports will be sent at regular intervals to inform relevant stakeholders and agencies (AMSA, NOPSEMA, CGG, survey contractors, etc.)" and some further information about reporting is included in Appendix B3, but it remains unclear whether "relevant stakeholders and agencies" includes all relevant persons or not.	Clarified the receivers of the POLREP and any future reports of this type. Also inserted justification for not automatically contacting all relevant persons in new section 8.3.3.
	The OPEP states that "*commercial and recreational fishers and other users that operate in the area would be advised of a large spill and response activities via CGG's 24-hour look-ahead* "; however, a "large" spill is not defined, and it is unclear how operators who had not requested to receive these look-aheads would be notified.	Removed the 'large' qualification and adjusted the frequency of communications. Also edited 8.5 in Appendix B3 to align with defined spill levels.
5.5	***The management of knowledge process is unclear***	
	Issue: There is not an appropriate management of knowledge process in place (**GL1721, Section 10.3**).	List provided.
	Reason: Appendix B3, Section 5.3.4 provides a list of documents that will be available to all staff and contractors and, although this list includes a copy of the implementation strategy, it is unclear whether full versions of key documents outlined in the implementation strategy (e.g., the Sail Line Plan, the Fauna Management Plan, etc.) will also be made available.	List provided.
5.6	***No assurances that control measures in the EP will continue to remain effective***	
	Issue: It is not clear how certain control measures in the EP will continue to be effective in reducing impacts and risks to ALARP and acceptable (**GL1721; Section 10.3**).	
	Reasons: a. The OAP (Appendix G4), which is an essential process for ensuring unavoidable impacts (i.e., those that remain following all reasonable attempts to avoid on-water interferences) to commercial marine users are reduced to acceptable levels, is in 'draft' form (e.g. '*KSV has undertaken preliminary consultation with some fishing industry associations prior to publishing this draft protocol*' ; Section 1.6 of Appendix G4). As a result of its draft status, it is unclear if the OAP has been reviewed by relevant and potentially impacted fishing stakeholders of the Otway area, or if it will be finalised in its current form.	OMICC feedbacks are now included in C2 and Appendix G4 is the finalised protocol (March 2025)
	b. As a key process linked to acceptable outcomes for commercial marine users; feedback from ongoing consultation and amendments to the OAP should be captured in the Implementation Strategy, to ensure impacts to all commercial marine users remain acceptable. Section 4 of the OAP (Appendix G4) specifies periodic review and maintenance (on a 12-monthly basis) of the protocol however there is no explicit mention of continual OAP review covered in the Implementation Strategy.	Appendix B3, section 5.2.1 and 8.2 have been updated. OMICC consultation regarding the OAP is now included in the C2 reports.
5.7	***The EP does not provide for appropriate ongoing consultation***	
	Issue 1: The EP does not demonstrate that ongoing consultation arrangements are in alignment with NOPSEMA's Environment Plan Content Requirement guidance note.	
	Reason 1: The activity may be undertaken up until October 2028 and, although the implementation strategy allows for new relevant persons to self-identify (Appendix B3, Section 8.5), it does not provide for CGG to perform a periodic review of relevant persons to ensure new relevant persons are identified and consulted over the life of the EP (**GN1344, Section 3.10.3.6**).	The following commitment has been made: "CGG will perform searches for relevant persons at least once per 12-month period and once, eight weeks prior to the commencement of the survey. There will be no searches for relevant persons after the end of the activity."
	Issue 2: The EP does not demonstrate that ongoing consultation arrangements with recreational divers are sufficient.	

Reason 2: The implementation strategy (Appendix B3, Section 8.1) does not provide timing for the commitment to placing adverts in local papers and dive shops to inform recreational divers about the diving SIMOPS plan to demonstrate sufficient time will be provided to raise awareness and encourage participation.	Appendix B3, section 8.1: the commitment has been updated with timing.
Acceptance Criteria 34(g)(i) - the EP does not demonstrate that the consultations required by regulation 25 have been carried out, because:	
6.1 ***It is not clear that effective consultation has taken place with each relevant person***	Update the GMTOAC report with all corro after 12 Nov.
Issue: The EP does not demonstrate that effective consultation has taken place with each relevant person (GL1721, Section 12.3). Effective consultation includes relevant persons have been provided sufficient information (regulation 25(2) of the Environment Regulations), and relevant persons have been provided a reasonable period to consider information and make an informed response (regulation 25(3) of the Environment Regulations).	Updated the GMTOAC report with all corro after 12 Nov.
Reasons: NOPSEMA is aware, from being copied into correspondence from Environment Justice Australia *acting* on the behalf of Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC) dated 11 November 2024, that GMTOAC has now finalised and given CGG a copy of the Gundtijmara Consultation and Negotiation Protocol (the Protocol). The EP does not describe or address the Protocol in demonstrating that effective consultation has taken place with GMTOAC in the manner required under regulation 25 of the Environment Regulations.	Appendix C1, Annex 2 has been updated to include a description and address the protocol.
6.2 ***The report on consultation is not in line with the content requirements***	
Issue: The EP does not contain a report on consultation that includes the prescriptive elements outlined in regulation 24(b) of the Environment Regulations (GL1721, Section 12.3).	
Reasons: 1. The full text records for the following relevant person responses described within the report on consultation (i.e. Appendix C2) could not be located in the sensitive information part of the EP: a. Australian Marine Conservation Society - Document ID 9048 (linked with Event ID 5123); and	This is now included in the SIR.
b. Fight for the Bight - Event ID 5303.	This is now included in the SIR.
2. The report on consultation does not include any details or records relating to the correspondence described at item 7.1 from Environment Justice Australia *acting* on the behalf of GMTOAC dated 11 November 2024 despite this being sent to CGG prior to the submission of the EP to NOPSEMA on 12 November 2024. The report on consultation should include details and records of any correspondence between CGG and relevant persons, up until the point that the EP is submitted to NOPSEMA, in accordance with the requirements under regulation 24(b) of the Environment Regulations.	Correspondance logs, including feedbacks, have been updated (Appendix C2).
Acceptance Criteria 34(g)(ii)-the EP does not demonstrate that appropriate measures have been adopted, or proposed to be adopted, because of consultation, because:	
7.1 ***Not all information gathered through consultation has been incorporated into the EP***	
Issue: Information gathered through the consultation process has not always been incorporated, considered and evaluated in the rest of the EP and effectively informed the identification of environmental values and sensitivities to ensure impacts and risks are reduced to ALARP and acceptable (**GL1721, Section 12.3**).	
Reasons: 1. As set out in OMR item 1.8 above, there is some information that was provided by BLCAC and WTOAC during consultation in relation to First Nations cultural features and values that has not been incorporated into the description of the existing environment and considered elsewhere in the EP where it may be relevant.	The EP has been updated to reflect this, see OMR item 1.8
2. As set out in OMR item 3.3 above, there is some information that was provided by Person ID 716 during consultation in relation to impacts to little penguins that has not been adequately accounted for within the impact and risk evaluations for the activity.	See OMR 3.3 updates
3. As set out in OMR item 1.2 above, additional spatial analysis of overlap with Commonwealth trawl historical fishing areas at an appropriate scale, as requested during consultation by SETFIA and provided by CGG in subsequent exchanges (Event IDs 4934/5195), has not been incorporated into the EP or applied for other key fisheries predicted to be impacted.	Appendix E1, Section 4.1 and Annex 3 have been updated.
4. As set out in OMR item 2.3 above, there is no consideration given in the EP to avoiding the western orange roughy data collection (research) program (WORDaC) Central Sampling Area despite this being a key concern raised in consultation by SETFIA /Atlantis Fisheries, requesting "that no MSS collection or turning overlaps these areas and further that there be a reasonable buffer to ensure that fish are not disturbed" (Event ID 1649). While CGG committed to not acquiring during the months May to October (Event ID 1842, Document ID 1013), CGG's assessment of merit or responses to SETFIA/Atlantis Fisheries do not make clear if this commitment relates to the Central Sampling Area or the specific mapped points, and also does not make clear if a separation distance would apply. SETFIA/Atlantis Fisheries also subsequently requested exclusion to start a month earlier (April) (Event ID 2003), which does not appear to have been considered in CGG's assessment of merit or subsequent responses to SETFIA/Atlantis Fisheries.	Appendix E1, section 8.1 has been updated along with the SETFIA feedbacks in Appendix C2, supported by a map with the updated activty areas included in Appendix B12 (MAP-REG-EPM-050_B). Activity limitation added to A2 and E1.
5. Information about the risks of unexploded ordinances (UXOs) that was given by Department of Defence during consultation has not been thoroughly accounted for by CGG within the impact and risk evaluations for the activity (i.e., UXOs are only addressed within the cumulative impact assessment scoping tool and not elsewhere).	Sections 4.6 & 9.2.5 in Appendix E1 - Physical presence have been updated to include UXOs
7.2 ***Not all assessments of merit and all responses to objections and claims are reasonable and supported***	
Issue: CGG's assessments of merit and responses to objections and claims made by some relevant persons do not always demonstrate that they are reasonable and supported to inform the appropriateness of the measures adopted because of consultation (**GL1721, Section 12.3**).	

	Reasons: 1. There are some assessments of the merits and response statements presented in the EP (i.e., Appendix C2) that apply to claims about commercial fisheries compensation that does not adequately describe how these claims were taken into consideration by CGG. In particular, reference is made to OMMIC consultation that is separate to the relevant persons consultation carried out by CGG in the preparation of the EP (and therefore not included in the EP submission for NOPSEMA's visibility). This specifically relates to claims raised by the Victorian Rock Lobster Committee via Seafood Industry Victoria (i.e., recommendation of the Otway Adjustment Protocol (OAP) to consider 'retirement of quota'; Event ID 4180) and by SETFIA (i.e., clarification pertaining to the loss adjustment in the OAP; Event ID 5193).	OMICC feedbacks are now included in Appendix C2
	2. The assessment of the merits and response statements presented in the EP (i.e., Appendix C2) that apply to ASBTIA's two discrete preferences relating to the environmental management of the activity (i.e., firstly for the activity timing to occur within the April to June period, and secondly for the survey to start in shallow waters and progressively move to deeper regions by the end of the survey period; Event ID 7990) does not adequately describe how and why it is reasonable for CGG to have incorporated the following activity limitation in response - "if the survey occurs in April, May or June, the acquisition lines will be acquired working from the shallowest lines first" (which does not appear to be an accurate representation of ASBTIA's preferences). Further to this, the EP is lacking content showing that consideration was given to ASBTIA's preferences by CGG during the preparation of the EP (also refer to OMR item 2.4).	Information considering these preferences have been added to Appendix E1, Section 8.1 and 8.2, and Feedback ID's 1300 and 1301 updated in Appendix C2.
7.3	***Not all assessments of merit and all responses to objections and claims are reasonable and supported – SETFIA/SSIA/Atlantis Fisheries***	
	Issue: CGG's assessments of merit and responses to objections and claims made by SETFIA, SSIA and Atlantis Fisheries regarding commercial fisheries data analyses do not always demonstrate that they are reasonable and supported to inform the appropriateness of the measures adopted because of consultation (**GL1721, Section 12.3**).	Consultation records have been included since last submission and fully reviewed.
	Reasons: The full text records of consultation with SETFIA, SSIA and Atlantis Fisheries and Annex 1 of Appendix C1 present an extensive record of consultation with SETFIA/SSIA/Atlantis Fisheries, including the issue of the adequacy of the data used to assess possible impacts to commercial fisheries, in particular to the Commonwealth Trawl Sector (CTS) and the Shark Gillnet and Hook Sector (SGHS) of the Southern and Eastern Scalefish and Shark Fishery (SESSF). SETFIA/SSIA/Atlantis Fisheries and CGG present reasons for and against utilising more detailed fishing effort and catch (tonnage and value) data.	A description of the ABARES data, obtained from AFMA, has been included in Appendix E1, section 4.1, along with a further review incorporating the 2023 Commonwealth fishery data. Further information has also been added to Appendix C1, Annex 1 - SETFIA/SSIA/Atlantis Consulting.
	However, it is not evident to NOPSEMA if CGG's assessment of the merits of SETFIA/SSIA/Atlantis Fisheries' request to use more detailed data is reasonable or supported because the format, resolution, accuracy, reliability and availability of data held by AFMA has not been clearly and explicitly described by either CGG or SETFIA/SSIA/Atlantis Fisheries. It is therefore unclear how the AFMA data compares with the ABARES fishing intensity data and other information learned by CGG from relevant fishers.	A description of the ABARES data, obtained from AFMA, has been included in Appendix E1, section 4.1, along with a further review incorporating the 2023 Commonwealth fishery data. Further information has also been added to Appendix C1, Annex 1 - SETFIA/SSIA/Atlantis Consulting.
	Consequently, it is also not evident from CGG's assessment of merit and responses to SETFIA/SSIA/Atlantis Fisheries whether or not the additional data could improve understanding and further inform: •minimisation of impacts to the CTS. NOPSEMA notes that CGG has committed in the EP to no acquisition in water depths less than 200m, which indicates that 'remaining overlap with trawl fishing would be outside of 'high' intensity zones', but how CGG would "minimise" operational activities with the CTS remains unclear. Refer to OMR item 2.3 and OMR item 2.4, for further considerations around this activity limitation; and	Feedbacks in Appendix C2 have been updated, along with Appendix C1, Annex 1, Appendix E1 section 8 and Appendix A2 section 4.
	•measures to reduce interactions with the SGHS. As described in OMR item 2.3, they do not appear to have been considered.	Appendix E1 section 8 and Appendix A2 section 4 have been updated to describe measures in place.
Additional Matters Raised		
1	**Figures depicting the Environmental Planning Area (EPA) for the activity are inconsistent. For example, Figure A2-1 in the activity description (Appendix A2) includes the whole of Point Nepean within the boundary, but the EPA depicted in Appendix B5 (used to generate Protected Matters Search Tool report) appears to be constrained to the southern coastline of Point Nepean and the Mornington Peninsula.**	Reviewed and updated.
2	**The titleholder response to RFFWI #1 states that "Map MAP-REG-EPM-076 has been included in the submission" but this map does not appear to be included. Theresponse also states that "CGG notes that there are no overlaps with any native title determinations and thus they are not affected by the activity and thus have notbeen described" despite the EP (Appendix E1, Section 4.6) stating that "although Native Title has not been identified to occur within the Operational Area, it isconsidered possible that cultural values and sensitivities associated with Eastern Maar and Gunditjmara Native Title determinations adjacent to the OperationalArea, may be indirectly affected by planned activities".**	Map MAP-REG-EPM-076 is included in Appendix B12. The relevant impact and risk appendices have been updated to include Cultural Features.
3	**Hyperlinks to maps should be fixed, the purpose of maps should be clear from the titles or where they are referred to within the text, and the latest boundaries applicable to each of the map's content and purpose should be included.**	CGG has tried another approach to presenting the maps that should retain the hyperlinks.
4	**These maps should be updated with the SEL_{24h} scenario lines and bathymetry contours to enable a reasonable understanding of the modelling scenarios that have been undertaken for impact prediction relative to the latest survey boundaries and water depths.**	Maps have been prepared and included in the submission.

5	**Mapped underwater noise 'exposure areas' appear inappropriate for some fishery target species in the commercial fishing review (Appendix B6). For example, inFigure 11 of Appendix B6, the legend indicates that a "Fish and Shark Sound Exposure Area" has been used for the Southern Squid Jig Fishery. In Figure 4 ofAppendix B6, the "Fish and Shark Exposure Area" has been used for the Small Pelagic Fishery but unclear if it is representative for some target species (e.g.,Australian sardine) with specialised hearing structures.**	Maps for commercial fisheries and their relationship to the proposed Regia MSS have all been updated to incorporate latest information. Assessments of all species have been undertaken according to their modelled exposure profiles.
6	**The EPO for IMS is presented inconsistently throughout the EP**	Updated G1 to reflect the risk assessment in D3.
7	**Inconsistent referral to number of vessels potentially being used**	Updated further assessment in the EP.
8	**Survey timing in Table F3-5 does not reflect the timing described in the activity description**	Updates made to align table with A2.
9	**uncertainty as to whether this will be implemented when the seismic source is not operating.**	Updates made to D2 and E7.
10	**the prediction of changes to fish behaviour does not distinguish between the different relative risk rankings assigned by Popper et al. (2014) to groups of fish according to their sensitivity to sound**	In section 9.1 paragraph 2 describes why fishes do not need to be grouped by sensitivity to sound. "Fishes were grouped and modelled according to the role of a swim bladder in their potential responses to seismic. However, in discussing predicted levels of impact here we group by type of impact. This is because modelled effects are very similar across the 3 groups. "
11	**Subheadings in the table of EPOs appear as EPOs, rather than sub-headings.**	Updated the table for clarity.
12	**Inconsistent information relating to the ASOP**	Updated G1 to reflect the statement in B3 to undertake the ASOP prior to the survey commencing.
13	**unclear whether ALARP assessment criteria for accidental release of fuel will be adopted or not**	Updated.
14	**The assessment IMS risk (Appendix D3) includes statements that marine pest establishment in the OA is considered unlikely due to water depth (40 – 1,400 m); however, also includes a description of IMS present in Victorian waters that have been documented in waters over 100 m depth (i.e., the New Zealand screw shell and the Northern pacific sea star). Additionally, the activity limitation to "minimise operational activity deeper than 200 m" suggests that vessels will be in shallower areas of the OA (where IMS would be more likely to become established) more often than the deeper areas of the OA during operations.**	Activity limitation removed
15	**Section 9 states IMS risk has been assessed as "low"; however, Section 10 assesses this risk as "medium".**	Updated to medium to relfect that result of the assessment.
16	**Sufficient information on the methods, inputs, assumptions, limitations and uncertainties of predictions of received sound levels should be clearly presented and is important for transparency and accurate interpretation (IP1765, Sections 3.3). Some of the methods, inputs, assumptions, limitations and uncertainties of the acoustic modelling are not clearly presented, for example:** **•Significant differences in the modelled per-pulse sound fields are evident at different single impulse sites in Appendix B7 (e.g. Appendix B7b, Table 13 where ranges to 160 dB SPL vary from 2.9 km to 11.8 km) that are not explained by the bathymetry, sound speed profile, presence of calcarenite and other geoacoustic parameters described in Appendix D3 of the modelling reports. These differences would benefit from further explanation.** **•Section 4 and Appendix D4 within EP Appendices B7a and B7b summarise input parameters and assumptions used for animal movement and exposure modelling. Further clarification is needed on the following:** **oWhether animats included in the pygmy blue whale foraging scenario and southern right whale aggregation scenarios included any directional bias or if they were undirected.** **oWhether the model assumes any avoidance in response to the sound source or if animats remain undirected.**	Information added to EP document Section 7.3