

CGG Regia Marine Seismic Survey EP – Rationale for Decision to Refuse

Purpose

This file note has been prepared in support of NOPSEMA's internal EP decision-making process. It provides a summary of the key reasons why NOPSEMA is not reasonably satisfied that the CGG Regia Marine Seismic Survey (MSS) environment plan (EP) meets the EP acceptance criteria under Regulation 34 of the Environment Regulations 2023.

NOPSEMA will progress a refuse decision for this EP.

Further detail on NOPSEMA's assessment findings is included in the Assessment Report (A1096104).

Background

The CGG Regia Marine Seismic Survey (MSS) environment plan (EP) was submitted by the titleholder (CGG Services [Australia] Pty Ltd) for a 30-day public comment period on 18 January 2024. Following the public comment period and submission of the revised EP by CGG, NOPSEMA's assessment of the EP commenced on 20 June 2024.

NOPSEMA issued a request for further written information (RFFWI) on 28 August 2024 (including general issues relating to the form and construct of the EP). NOPSEMA issued an opportunity to modify and resubmit (OMR; OMR#1) on 7 February 2025. NOPSEMA issued another OMR (OMR#2) on 20 June 2025. CGG submitted the current version of the EP on 10 December 2025. NOPSEMA's decision on the current version of the EP is due 16 February 2026.

Key reasons to refuse to accept the EP

Significant and fundamental issues remain unaddressed in the current version of the EP, resubmitted 10 December 2025, that prevent NOPSEMA from being reasonably satisfied that the EP meets the following regulatory acceptance criteria:

- Criterion 34(c) – The plan demonstrates that the environmental impacts and risks of the activity will be of an acceptable level.
- Criterion 34(d) – The plan provides for appropriate environmental performance outcomes, environmental performance standards and measurement criteria.
- Criterion 34(e) – The plan includes an appropriate implementation strategy and monitoring, recording and reporting arrangements.

- Criterion 34(g) – The plan demonstrate that the titleholder has carried out the consultations required and that measures (if any) are appropriate
- Criterion 34(h) – The plan complies with the Act and Regulations.

The key issues are:

1. The EP does not demonstrate that underwater noise impacts will be of an acceptable level because the uncertainty in impact predictions is not adequately addressed – Criterion 34(c).
2. The EP does not demonstrate that the proposed activity is not inconsistent with the Blue Whale Conservation Management Plan – Criterion 34(c).
3. The EP does not demonstrate that impacts and risks to fish and invertebrates will be of an acceptable level because the EP sets defined acceptable thresholds that are either unachievable or inconsistent with predicted impacts – Criterion 34(c).
4. The EP does not provide clear or appropriate environmental performance outcomes to demonstrate that impacts to Southern Right Whales will be consistent with the Recovery Plan – Criterion 34(d).
5. The EP does not include an appropriate implementation strategy with sufficient measures in place for ongoing monitoring and assurance of environmental compliance – Criterion 34(e).
6. The EP does not demonstrate that the titleholder has carried out the consultations required and that measures (if any) are appropriate – Criterion 34(g).
7. The EP does not comply with the Act and Regulations – Criterion 34(h).

Further information on each issue is provided below.

KEY ISSUE 1: The EP does not demonstrate that underwater noise impacts will be of an acceptable level because the uncertainty in impact predictions is not adequately addressed – Criterion 34(c).

The EP does not provide a reliable or evidence-based demonstration that underwater noise impacts will be of an acceptable level because there are areas of substantial predictive uncertainty in predictive modelling and impact and risk assessments that have not been adequately addressed. For example:

1. The EP contains three numerical acoustic modelling studies prepared by two different providers. These studies produce materially different predicted impact ranges, resulting in two contrasting lines of evidence. The differences between these two lines of evidence have been identified and acknowledged, but are not adequately evaluated, reconciled, or justified in the EP.
2. Impact assessments incorporate predictions from the final modelling study, which in some cases provide the least conservative set of predictions, without adequate explanation or justification as to why they should be considered sufficiently representative or as reliable than the other modelling study. The

modelling reports and the EP show potential limitations in the modelling approach used that have not been reconciled.

3. Key control measures proposed in the EP are not commensurate with the level of uncertainty that exists, or account for potentially larger areas of impact (e.g. shutdown measures for pygmy blue whales to prevent displacement from a foraging area, appropriate buffer to prevent behavioural disturbance to fish so as not to compromise the integrity of the Orange Roughy Research Programme).
4. A sound source verification programme is proposed, however, there are few corrective measures if actual sound levels exceed predictions, leaving a clear gap in the ability to manage impacts. Adaptive responses are largely confined to southern right whales in the reproduction BIA, with no equivalent measures for foraging pygmy blue whales or other fauna.

Therefore, the EP does not provide reliable impact predictions, and proposed control measures are not adequately conservative to address the level of uncertainty that has been introduced, or account for potentially larger areas of impact. The uncertainty in impact predictions is embedded in impact assessments, control measures, EPOs, and EPSs that are relied upon in the EP, which collectively fail to account for potentially larger areas of impact or demonstrate that underwater noise impacts will be managed to acceptable levels.

Given the level of predictive uncertainty presented in the EP, the EP does not demonstrate that underwater sound impacts arising from the activity will be of an acceptable level (Criterion 34(e)).

How this issue has already been raised with the titleholder:

- In OMR#1 (Feb 2025), letter item included in relation to areas of uncertainty in prediction of impacts – *Underwater sound model predictions for marine mammals need to consider the best available science and appropriate impact threshold criteria* – in relation to NMFS (2024) criteria specifically.
- OMR#2 (June 2025) – Areas of uncertainty in underwater sound model predictions of impacts to marine mammals have not been adequately addressed – in relation to NMFS (2024) criteria specifically.
- Following OMR#2, the titleholder opted to change to a different model provider. NOPSEMA advised the titleholder in multiple meetings to explain and demonstrate why their chosen approach of using modelling from a new provider is representative and as reliable as previous modelling, and to account for uncertainty / apply conservatism.

Relevant EP Acceptance Criteria and DMG Factors:

Criteria 34(c) – The EP does not demonstrate that environmental impacts and risks will be of an acceptable level.

- Evidence that all impacts and risks (in particular to protected matters) will be managed to acceptable levels.

- The EP content demonstrates that the proposed activity is not inconsistent with a recovery plan or threat abatement plan for a listed threatened species or ecological community
- Areas of uncertainty in predictions of impact and risk are identified, acknowledged and addressed.

Alternative options considered:

Accept in part, with limitations or conditions – Setting conditions for more conservative control measures was considered but is not appropriate, noting that there is uncertainty regarding what the appropriate distances would need to be.

OMR/RFFWI – An OMR could request answers to the modelling uncertainty and could potentially result in revisions to the modelling. However, the assessment has already involved 1x RFFWI, 2x OMRs and substantial effort by NOPSEMA explaining issues to the titleholder. The titleholder was advised that NOPSEMA would make a decision based on this submission and the risks of commencing new modelling late in the process were made clear.

KEY ISSUE 2: The EP does not demonstrate that the proposed activity is not inconsistent with the Blue Whale Conservation Management Plan.

A key control measure proposed in the EP to prevent behavioural disturbance and TTS to blue whales is a 5 km shutdown zone. However, given the two contrasting lines of evidence presented by the acoustic modelling and uncertainty in the impact prediction (Refer to 1.1), the EP has not demonstrated that the shutdown zone for blue whales will be sufficient to manage sound in a manner that is not inconsistent with the Blue Whale Conservation Management Plan (e.g. *'any blue whale continues to utilise the area without injury, and is not displaced from a foraging area'*).

How this issue has already been raised with the titleholder:

This issue has arisen as a result of uncertainty in the model submitted with the final revision (see Issue 1 above). As such, this specific issue has not previously been raised with the titleholder; however, issues have been raised in OMR#1 and OMR#2 in relation to demonstrating the effectiveness of detection and mitigation measures for blue whales.

Relevant EP Acceptance Criteria and DMG Factors:

Criteria 34(c) – The EP does not demonstrate that environmental impacts and risks will be of an acceptable level.

- Evidence that all impacts and risks (in particular to protected matters) will be managed to acceptable levels.

- The EP content demonstrates that the proposed activity is not inconsistent with a recovery plan or threat abatement plan for a listed threatened species or ecological community
- Areas of uncertainty in predictions of impact and risk are identified, acknowledged and addressed.

Alternative options considered:

Accept in part, with limitations or conditions – Setting conditions for more conservative control measures was considered but is not appropriate, noting that there is uncertainty regarding what the appropriate distances would need to be.

OMR/RFFWI – An OMR could request answers to the modelling uncertainty and could potentially result in revisions to the modelling. However, the assessment has already involved 1x RFFWI, 2x OMRs and substantial effort by NOPSEMA explaining issues to the titleholder. The titleholder was advised that NOPSEMA would make a decision based on this submission and the risks of commencing new modelling late in the process were made clear.

KEY ISSUE 3: The EP does not demonstrate that defined acceptable levels of impact for fish and invertebrates will be achievable - Criterion 34(c).

The EP does not demonstrate that impacts and risks to fish and invertebrates will be at an acceptable level. This is because the EP establishes several defined acceptable levels for fish and invertebrates that are either not achievable or are inconsistent with impact predictions. For example:

1. Defined acceptable levels for fish include a requirement for no exposure above a TTS threshold (186 dB SEL_{24hr}).
2. Defined acceptable levels for molluscs require that sound levels do not exceed 212 dB PK-PK.
3. Cephalopods are assigned an acceptable level based on a 162 dB SEL threshold.

However, numerical acoustic modelling and the impact assessments predict that exposure of fish and invertebrates to sound levels above these thresholds will occur. Therefore, the EP does not demonstrate that the defined acceptable levels will be achieved, and no additional justification or control measures address this. Because the EP does not show that the defined acceptable levels can be achieved, the EP fails to demonstrate that impacts and risks to fish and invertebrates will be reduced to acceptable levels (Criterion 34(c)).

How this issue has already been raised with the titleholder:

Defined acceptable levels of impact not being achievable were raised in OMR#1 and OMR#2. Specific examples were identified to the titleholder and discussed at length during titleholder meetings, but have not been appropriately addressed.

Relevant EP Acceptance Criteria and DMG Factors:

Criterion 34(c) – The plan demonstrates that the environmental impacts and risks of the activity will be of an acceptable level:

- Acceptable levels are compared to predicted levels of impact and risk to demonstrate that acceptable levels will be achievable.
- Evidence that all impacts and risks will be managed to acceptable levels.

Alternative options considered:

- Accept in part, with limitations or conditions – N/A – The EP cannot be accepted in part without potentially being inconsistent with defined acceptable levels of impact. Setting a condition would not be appropriate. Including a condition on acceptance of the EP to meet the titleholder's defined acceptable levels would not remove the problem of achievability. It would also be inappropriate for NOPSEMA to set a condition on acceptance of the EP that defines an alternative acceptable level and demonstrate that it will be achievable on the titleholder's behalf.
- OMR/RFFWI – An OMR could be used to raise the issues of defined acceptable levels and overall demonstration of acceptable levels again. However, the issues have been raised in the two previous OMRs issued to the titleholder.

KEY ISSUE 4: The EP does not provide clear or appropriate environmental performance outcomes to demonstrate that impacts to Southern Right Whales will be managed consistent with the Recovery Plan – Criterion 34(d).

The EP does not set clear, consistent, or appropriate Environmental Performance Outcomes (EPOs) capable of demonstrating that impacts and risks to Southern Right Whales (SRWs) will be reduced to acceptable levels or consistent with obligations under the SRW Recovery Plan. For example:

1. The impact assessment in Appendix F3 (Further Assessment of Key Environmental Values and Sensitivities) states that *'To meet the Recovery Plan obligations and the defined acceptable levels, the management approach must ensure that SRWs can continue to utilise the reproduction BIA and that the risk of behavioural disturbance is minimised... To operationalise these principles, CGG will manage to an EPO whereby, "No behavioural disturbance will occur to any SRW within the reproduction BIA as a result of*

the Regia MSS.” However, the EPO referenced is not included in Appendix G1 (Environmental Performance Tables), which indicates that the EP has not set this EPO¹.

2. Instead, Appendix G1 includes an EPO, ‘*As a result of the implementation of real-time monitoring and activity limitations, SRW are not exposed to sound levels that cause substantial behavioural disturbance within or adjacent to BIAs or HCTS*’. However, the EP does not define “substantial behavioural disturbance” or make a case for how NOPSEMA accepting the EP inclusive of this EPO will not be inconsistent with requirements the SRW Recovery Plan with respect to managing impacts of underwater noise (i.e. does not prevent any southern right whale from utilising the area, and the risk of behavioural disturbance is minimised).
3. Appendix G1 contains an incomplete EPO relevant to SRWs, ‘*As a result of implementing shutdown or relocation procedures when a SRW enters the 13km ensonified area _____*’ [sic]. As the EPO is incomplete in Appendix G1, it is unclear what the level of environmental performance to be achieved is intended to be and, therefore, whether a decision by NOPSEMA to accept the EP would not be inconsistent with the SRW Recovery Plan. .

NOPSEMA acknowledges that the EP proposes a number of measures (temporal and spatial limitations, detection measures, management measures, sound source verification and adaptive management), which may be reasonable to manage potential impacts to SRW, but it is the levels of environmental performance (the EPOs) that these measures are setting out to achieve that are either incomplete or ambiguous as to whether they will ensure the activity is not inconsistent with the SRW Recovery Plan.

The EPOs set in the EP are not appropriate for a key impact to a matter of national environmental significance because they:

- do not set a clear level of performance that would enable NOPSEMA to make a decision to accept the EP that is not inconsistent with a recovery plan; and
- are incomplete not setting a level of environmental performance.

(Criterion 34(d)).

How this issue has already been raised with the titleholder:

The issues of EPOs not being clearly linked to defined acceptable levels were matters raised in the RFFWI, OMR#1 and OMR#2. Specific examples were identified to the titleholder and discussed at length during titleholder meetings, but have not been appropriately addressed.

¹ The EP (page 76) states that “*The tables in Appendix G1 set out environmental performance for the activity... Any inconsistencies that may be found in other parts of the EP are considered superseded by the tables in Appendix G1. Such inconsistencies that remain in the EP are either an artefact from the passage of time due to the iterative nature of the process, or an unintentional error.*”

Relevant EP Acceptance Criteria and DMG Factors:

Criterion 34(d) – The plan provides for appropriate environmental performance outcomes, environmental performance standards and measurement criteria.

- Clear, unambiguous EPOs that are linked to acceptable levels.
- EPOs reflect levels of environmental performance for management that are achievable and reflect the relevant Program requirements.

Alternative options considered:

- Accept in part, with limitations or conditions – A condition on acceptance of the EP could be included that sets an EPO that requires that CGG undertakes the survey in a manner that is *verbatim* consistent with the wording of the relevant actions in the recovery plan.
- OMR/RFFWI – An OMR could be used to raise the issue of EPOs again. However, the issue has been raised in the two previous OMRs issued to the titleholder.

KEY ISSUE 5: The EP does not include an appropriate implementation strategy with appropriate measures in place for ongoing monitoring and assurance of environmental compliance – Criterion 34(e)

The EP has not demonstrated that appropriate assurance mechanisms are in place for monitoring and assurance of environmental compliance. This is because the frequency of key environmental audits is not demonstrated to be sufficient to ensure ongoing compliance with all EP commitments for the duration of the activity.

The EP outlines that an “Environmental Compliance Register” (ECR) will be developed as an audit tool to track compliance with all EP commitments, including EPOs, EPSs and MC, activity description, activity limitations, implementation strategy and “**any other EP commitments**”.

Due to the complex format of the EP, there are EP commitments relevant for environmental management of the activity that do not have associated environmental performance standards or measurement criteria and are not located in sections of the EP flagged for regular review (for example, but not limited to, a commitment in Appendix A2 (Description of the Activity) that deployed equipment will not be towed through an Australian Marine Park). Because of this, the ECR is the sole assurance mechanism for ensuring and tracking compliance with **all EP commitments**.

However, the EP (Appendix B3, Section 5.6.3) details only **one** audit of the ECR (during the commencement audit, within 7 days of the activity commencing). This is not demonstrated to be sufficient for ongoing assurance during an activity of 90 days.

Although the EP includes provisions for more regular review of compliance with EP commitments in certain sections of the EP (e.g., EPOs and EPSs, Activity Limitations, etc) as well as weekly environmental audit of daily operations and HSE

reports, this does not address the issue outlined above, as these measures fail to assess compliance with all EP commitments.

How this issue has already been raised with the titleholder:

- OMR #1 outlined a number of issues related to lack of clarity and insufficiency of assurance mechanisms described in the implementation strategy.
- OMR #2 outlined that mechanisms proposed to monitor ongoing environmental performance and compliance with all EP commitments were not demonstrated to be sufficient and robust. These issues remain in the resubmission (December 2025). In fact, the mechanisms proposed in the resubmission are now less robust than those described in the previous revision, which included reference to additional audit of the ECR before activity commencement.

Relevant EP Acceptance Criteria and DMG Factors:

Criterion 34(e) – EP includes an appropriate implementation strategy and monitoring, recording and reporting arrangements:

- Appropriate assurance mechanisms are in place including audit, review and management of non-conformance processes.

Alternative options considered:

- Accept in part, with limitations or conditions – Expectations for compliance assurance could be included as a condition.
- Inspection – NOPSEMA could potentially confirm if appropriate compliance assurance measures are being implemented through an inspection, although identification and correction of any issues would potentially be reactive, rather than proactive.
- OMR/RFFWI – An OMR could raise the issue again, however, the issue was already clearly communicated to the titleholder in OMR#2 and NOPSEMA made CGG aware that a decision would be made on the latest submission.

KEY ISSUE 6: The EP does not demonstrate that the titleholder has carried out the consultations required and that measures (if any) are appropriate - Criterion 34(g)

The titleholder has not demonstrated that a reasonable buffer exists between the survey acquisition area and Orange Roughy Research Program sampling sites to avoid disturbance to fish (as to not compromise the integrity of the Orange Roughy Research Program), a matter that was raised during relevant persons consultation (Event ID 1649).

While the titleholder adopted an activity limitation (Section 4.2 of Appendix A) prohibiting sound source discharge within the research areas, it did not modify the existing 5.27 km buffer. Instead, the EP relies on one study's findings that suggested negligible disruption to the spawning behaviour of cod within 5–40 km of a seismic survey to justify the adequacy of the current buffer. This justification does not

address potential seismic impacts on fish catchability, which was central to SETFIA's concern.

In addition, the latest EP submission (December 2025) introduces new impact threshold criteria for fish behavioural disturbance, which the latest modelling indicates may result in behavioural disturbance (13.8 km) over distances greater than the 5.27 km buffer proposed.

It is therefore not evident that the measures that the titleholder has adopted, or proposes to adopt, because of the consultation are appropriate.

How this issue has already been raised with the titleholder:

- The issue of an appropriate buffer for the Orange Roughy sampling area was raised twice in OMR#1 (letter point 2.3 – *'There is not a thorough consideration and evaluation of all reasonable control measures'*, and letter point 7.1 – *'Not all information gathered through consultation has been incorporated into the EP'*), and then again in OMR#2 (letter point 5.1 – *'Not all information gathered through consultation has been incorporated into the EP'*)

Relevant EP Acceptance Criteria and DMG Factors:

Criteria 34(g) – EP demonstrates that the titleholder has carried out the consultations required and that measures are appropriate:

- The titleholder's assessment of merit and all responses to objections and claims are reasonable and supported, and inform the measures adopted because of the consultation.

Alternative options considered:

- Accept in part, with limitations or conditions – Conditioning of an appropriate buffer would require NOPSEMA to determine an appropriate distance, noting that issues are identified above in relation to uncertainty in impact predictions.
- OMR/RFFWI – An OMR could raise the issue again, however, the issues have been raised in two OMRs already.

KEY ISSUE 7: The EP does not comply with the Act and Regulations – Criterion 34(h)

The EP is not consistent with the 'Objects' of the Environment Regulations because it does not demonstrate environmental impacts and risks from the activity will be of an acceptable level (as outlined above under 34(c)).

How this issue has already been raised with the titleholder:

No issues have been raised in the RFFWI or OMRs previously under acceptance criterion 34(h). NOPSEMA is not reasonably satisfied that the EP meets the acceptance criterion set out in regulation 34(h) as a result of the EP not

demonstrating that impacts and risks from the activity would be of an acceptable level under regulation 34(c) (as outlined above).

Relevant EP Acceptance Criteria and DMG Factors:

Criterion 34(h) – The EP complies with the Act and Regulations:

- The EP is consistent with the ‘Objects’ of the Environment Regulations, including the principles of ESD.

Alternative options considered:

As NOPSEMA’s reason for not being reasonably satisfied under this criterion is only due to NOPSEMA not being reasonably satisfied that criterion 34(c) has been met, no further options are considered further to those outlined above.