

**BEFORE THE EPA  
OMV NEW ZEALAND LIMITED APPLICATION FOR MARINE DISCHARGE  
CONSENT TO DISCHARGE OFFSHORE PROCESSING DRAINAGE (HARMFUL  
SUBSTANCES FROM DECK DRAINS)**

**IN THE MATTER** of the Exclusive Economic Zone and Continental Shelf  
(Environmental Effects) Act 2012

**AND**

**IN THE MATTER** of a Decision-making Committee appointed to consider a  
marine discharge consent application made by OMV New  
Zealand Limited for the discharge of trace amounts of  
harmful substances from deck drains in the  
South Taranaki Bight

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**STATEMENT OF EVIDENCE OF DANIEL GOVIER FOR  
OMV NEW ZEALAND LIMITED**

**Environmental impact assessment**

**Dated:** 30 July 2018

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## EXECUTIVE SUMMARY

1. My evidence covers three main components in relation to OMV New Zealand's application for discharge consent for the discharge of trace amounts of harmful substances from deck drains:
  - (a) An assessment of the marine discharge consent application;
  - (b) An assessment of the proposed marine discharge consent conditions; and
  - (c) An assessment of the project against the purpose of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (**EEZ Act**) in drawing on my conclusion.
2. In my view, the proposed discharge is consistent with the 'sustainable management' purpose in section 10 of the EEZ Act.
3. A detailed Environmental Risk Assessment (**ERA**) process was undertaken as part of the IA, and the risk to receptors, and the effects on the environment and existing interests from the activity were considered to be negligible.
4. For the reasons outlined in my evidence, and the evidence presented by OMV New Zealand's expert witnesses, I consider that, subject to the adoption of the proposed conditions, and the implementation of the management procedures and mitigation measures identified in the IA, any adverse effects associated with the activity will be negligible or *de minimis*.

## INTRODUCTION

### Qualifications and experience

5. My full name is Daniel Govier.
6. I have degrees in Bachelor of Science (Zoology), a Post-Graduate Diploma in Marine Science, and a Master of Science in Marine Science, all from University of Otago.
7. I am currently employed as the Asia-Pacific Technical Discipline Manager – Marine Science at SLR Consulting Limited (**SLR**), based in Nelson, and

have held that position since October 2014. SLR is an environmental consultancy that specialises in IAs, resource consent applications, marine consent applications, and marine discharge consent applications and the development and execution of marine environmental monitoring programmes.

8. Prior to joining SLR, I have held a number of relevant roles. I was the Managing Director at Environmental Offshore Services (2013-2014), specialising in IAs of the offshore marine environment around New Zealand for the oil and gas industry. Environmental Offshore Services was acquired by SLR in October 2014.
9. I was an environmental consultant at Resource and Environmental Management Ltd (2010-2013), where I prepared a number of IAs in New Zealand's offshore marine environment, during the transitional, provisional and fully enacted EEZ Act.
10. I was the Operations Manager at Challenger Scallop Enhancement Company (2009-2010). This role involved the management of the commercial dredge scallop fishery at the top of the South Island and scallop stock assessments.
11. I was a Marine Ecologist at the Cawthron Institute in Nelson (2006-2009). In this role I completed a number of Assessments of Environmental Effects and resource consent applications around the marine environment. In addition, I was involved in developing and executing a large number of ecological monitoring programmes in the marine environment, mainly around marine farms (both finfish and bivalve).
12. I was a Marine Ecologist at the Taranaki Regional Council (**TRC**) (2002-2006). During my time at the TRC, I led all the marine ecological monitoring programmes along the entire Taranaki coastline and further developed my experience and knowledge of the Taranaki marine environment. Monitoring programmes were undertaken for all discharge related resource consents in the Coastal Marine Area (**CMA**) and formed part of the compliance monitoring of resource consents. I processed a number of resource consent applications within the CMA, produced officer's reports and developed conditions in accordance with the Resource Management Act, 1991 (**RMA**).

During my time at the TRC I was involved in all oil and gas related resource consent applications, which included the consenting of the Pohokura Field and the Kupe Field.

13. In summary, I have prepared and processed numerous resource consent, marine consent and marine discharge consent applications throughout New Zealand's Exclusive Economic Zone (**EEZ**) and CMA. As a result, I have gained a very good understanding of the different regulatory regimes, and the sensitivities and status of the existing marine environment around New Zealand. This experience spans many regions where oil and gas activities have taken place as well as in regions where oil and gas exploration has not yet occurred.

### **Code of Conduct**

14. I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court of New Zealand Practice Note 2011 and that I have complied with it when preparing my evidence. Other than when I state that I am relying on the advice of another person, this evidence is entirely within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.
15. I confirm the contents of this evidence are true and correct to the best of my knowledge.

### **Abbreviations**

16. I use the following abbreviations in my evidence:
- AOI – Areas of Interest;
  - CMA – Coastal Marine Area;
  - DMC – Decision-making Committee;
  - EAD Programme – Exploration and Appraisal Drilling Programme;
  - EEZ – Exclusive Economic Zone;
  - EEZ Act – Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012;
  - EPA – Environmental Protection Authority;
  - ERA – Environmental Risk Assessment;

- ESRP – Emergency Spill Response Plan;
- HSNO – Hazardous Substances and New Organisms;
- IA – Impact Assessments;
- MDC – Marlborough District Council;
- MNZ – Maritime New Zealand;
- MODU – Mobile Offshore Drilling Unit;
- RMA – Resource Management Act, 1991;
- SLR – SLR Consulting NZ Limited; and
- TRC – Taranaki Regional Council.

### **Role in marine consent application**

- 17.** SLR was engaged by OMV New Zealand to assist with the regulatory applications required under the EEZ Act, Maritime Transport Act 1994 and the RMA to enable the commencement of its EAD Programme. This includes preparing the marine discharge consent application and IA that is the subject of this evidence.
- 18.** I am Project Manager for the SLR Project Team and associated sub-consultants who were engaged to provide the relevant technical reports. I led the development and preparation of the IA and the ERA. Given this role, I have been asked to provide evidence about the IA, and the section 59, section 61 and section 10 considerations relevant to my expertise.

### **Scope of Evidence**

- 19.** In this brief of evidence, I will discuss:
- (a) An assessment of the marine discharge consent application covering:
    - (i) A summary of the application;
    - (ii) The decision-making framework set out in section 59 of the EEZ Act and the purpose of the EEZ Act (section 10);

- (iii) My assessment of the application against the section 59 matters within my expertise; and
  - (iv) My assessment of the EPA Key Issues Report, the Stantec report on dealing with uncertainty, and the submissions relevant to my expertise.
- (b) An assessment of the proposed marine consent conditions; and
  - (c) An assessment of the project against the purpose of the EEZ Act in drawing on my conclusion.

## **SUMMARY OF APPLICATION**

- 20.** OMV New Zealand has applied for a marine discharge consent under section 38 of the EEZ Act. The application is to permit the discharge of trace amounts of harmful substances from the deck drains of a MODU associated with its EAD Programme.
- 21.** The EAD Programme includes the drilling of up to nine exploration wells and two appraisal wells within OMV New Zealand's exploration permit areas. Drilling is anticipated to commence in 2019, and is likely to be completed as part of one or more drilling campaigns over the subsequent duration of the relevant exploration permits.
- 22.** The proposed wells are located within the Taranaki Basin and require a number of different approvals, in accordance with the EEZ Act, RMA and Maritime Transport Act 1994. Risks not associated with deck drainage discharges, such as mobilising and demobilising a MODU and drilling in the EEZ, as well as the need for emergency response plans, will be addressed in separate applications and regulatory processes under other marine management regimes.
- 23.** At the time of preparing this statement, the additional required applications have not been lodged with the Environmental Protection Authority (**EPA**), Maritime New Zealand (**MNZ**) and Marlborough District Council (**MDC**), but I understand that these applications will be made in the near future.

24. The scope of the IA submitted in support of the marine discharge consent is confined to matters directly relevant to the activity for which consent is sought – the discharge of trace amounts of harmful substances from the deck drains of a MODU.
25. The potential discharge volumes during rain events, harmful substances dilution calculations and the likely zone of influence if a harmful substance discharge occurs is discussed in sections 3.5, 3.6 and 3.7 of the IA, and also in the evidence of **Mr Forrest**.
26. The IA took into account the geographical spread of the well locations and three Areas of Interest (**AOI**) were identified for the assessment. The existing marine habitats and communities were taken into account for each AOI.
27. An ERA was undertaken as part of the IA to identify the relative significance of potential effects from the discharge of trace amounts of harmful substances from the deck drains of a MODU. The methodology for the IA was adapted from NIWA's risk assessment framework for activities in New Zealand's EEZ and extended continental shelf (MacDiarmid et al. (2012)). This is discussed in further detail in section 7 of the IA.
28. The following factors were taken into account in the assessment of effects on the environment from the proposed discharge:
- (a) The MODU and operational procedures have been designed to minimise the potential for discharges of harmful substances through a number of measures such as secondary containment/bunding, shut off drains, alarms, etc. The mitigation measures in place on the MODU will ensure that the probability of a loss of containment of a harmful substance to deck is as low as reasonably practicable;
  - (b) If a loss of containment of harmful substance to deck occurs, there will only be trace amounts left on the deck following clean up procedures that will be in place as part of the Emergency Spill Response Plan;



- (c) Should any trace amounts of harmful substance make it into the deck drainage system, the concentrations of harmful substance within the product will be diluted in the settling tank. Upon discharge to the marine environment, the harmful substance would be further diluted;
- (d) The discharge of trace amounts of harmful substances will be immeasurable in the receiving water well within a 200 m zone of influence. This is a result of the low volume of harmful substance and the high energy Taranaki offshore marine environment; and
- (e) Any discharges of trace amounts of harmful substances from deck drainage to the marine environment will be accidental and at most intermittent.

29. After working through the detailed ERA process, my team and I concluded that that the risk to receptors and the effects on the marine environment, existing interests and human health from the discharge of trace amounts of harmful substances from deck drainage is negligible.

## **DECISION MAKING FRAMEWORK**

30. Unlike resource consent applications under the RMA, there is not yet a policy framework to guide decision-making under the EEZ Act.<sup>1</sup> However, the Decision-making Committee (**DMC**) must consider the matters set out in section 59 of the Act. Section 59 is set out below for ease of reference. I have highlighted subsection (2A) which is of particular relevance to this application:

### **59 Marine consent authority's consideration of application**

- (1) This section and sections 60 and 61 apply when a marine consent authority is considering an application for a marine consent and submissions on the application.
- (2) If the application relates to a section 20 activity (other than an activity referred to in section 20(2)(ba)), a marine consent authority must take into account –

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<sup>1</sup> For example, no National Policy Statements have been created for any activities in the EEZ.

- (a) any effects on the environment or existing interests of allowing the activity, including –
  - (i) cumulative effects; and
  - (ii) effects that may occur in New Zealand or in the waters above or beyond the continental shelf beyond the outer limits of the exclusive economic zone; and
- (b) the effects on the environment or existing interests of other activities undertaken in the area covered by the application or in its vicinity, including –
  - (i) the effects of activities that are not regulated under this Act; and
  - (ii) effects that may occur in New Zealand or in the waters above or beyond the continental shelf beyond the outer limits of the exclusive economic zone; and
- (c) the effects on human health that may arise from effects on the environment; and
- (d) the importance of protecting the biological diversity and integrity of marine species, ecosystems, and processes, and
- (e) the importance of protecting rare and vulnerable ecosystems and the habitats of threatened species; and
- (f) the economic benefit to New Zealand of allowing the application; and
- (g) the efficient use and development of natural resources; and
- (h) the nature and effect of other marine management regimes; and
- (i) best practice in relation to an industry or activity; and
- (j) the extent to which imposing conditions under section 63 might avoid, remedy, or mitigate the adverse effects of the activity; and
- (k) relevant regulations (other than EEZ policy statements); and
- (l) any other applicable law (other than EEZ policy statements); and
- (m) any other matter the marine consent authority considers relevant and reasonably necessary to determine the application.

**(2A) If the application is for a marine discharge consent, the EPA must take into account –**

- (a) the matters described in subsection (2), except paragraph (c); and**
- (b) the effects on human health of the discharge of harmful substances if consent is granted.**

- (2B) If the application is for a marine dumping consent or relates to an activity referred to in section 20(2)(ba), the EPA must take into account –
- (a) the matters described in subsection (2), except paragraphs (c), (f), (g), and (i); and
  - (b) the effects on human health of the dumping of waste or other matter, or the abandonment of the pipeline, if consent is granted; and
  - (c) any alternative methods of disposal of the waste, other matter, or pipeline that could be used; and
  - (d) whether there are practical opportunities to reuse, recycle, or treat the waste, other matter, or pipeline.
- (3) The marine consent authority must have regards to –
- (aa) EEZ policy statements; and
  - (a) any submissions made and evidence given in relation to the application; and
  - (b) any advice, reports, or information sought under this Part and received in relation to the applications; and
  - (c) any advice received from the Māori Advisory Committee.
- (4) When considering an application affected by section 74, the marine consent authority must also have regard to the value of the investment in the activity of the existing consent holder.
- (5) Despite subsection (3), the marine consent authority must not have regards to –
- (a) trade competition or the effects of trade competition; or
  - (b) the effects on climate change of discharging greenhouse gases into the air; or
  - (c) any effects on a person's existing interest if the person has given written approval to the proposed activity.
- (6) Subsection (5)(c) does not apply if the person has given written approval but the person withdraws the approval by giving written notice to the marine consent authority –
- (a) before the date of the hearing, if there is one; or
  - (b) if there is no hearing, before the marine consent authority decides the application.

**31.** Section 60 contains further matters that the DMC must have regard to when considering the effects of an activity on existing interests under section 59(2)(a) above. Section 61 also prescribes information principles that the DMC is required to follow.

32. Section 10 is also a key consideration, being the purpose of the Act. It is set out below:

**10 Purpose**

- (1) The purpose of this Act is to promote the sustainable management of the natural resources of the exclusive economic zone and the continental shelf.
- (2) In this Act, sustainable management means managing the use, development, and protection of natural resources in a way, or at a rate, that enables people to provide for their economic well-being while—
- (a) sustaining the potential of natural resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
  - (b) safeguarding the life-supporting capacity of the environment; and
  - (c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.
- (3) In order to achieve the purpose, decision-makers must—
- (a) take into account decision-making criteria specified in relation to particular decisions; and
  - (b) apply the information principles to the development of regulations and the consideration of applications for marine consent.

33. The assessment that follows will step through the key relevant aspects of section 59 within my expertise, address the uncertainty and risk associated with the application, and section 10.

## **ASSESSMENT AGAINST SECTION 59 MATTERS**

### **Section 59(2)(a) and (b) – Effects on the environment or existing interests**

#### *Effects on the environment*

34. The effects of the activity on the environment and existing interests is addressed comprehensively in Section 7 of the IA and I do not intend to repeat that here. Also, the important factors that influenced our assessment of the potential effects of the activity on the environment are set out in

**paragraph 28** above. I also have read and rely on the evidence of **Mr Forrest, Mr Hollinger and Mr Park**.

- 35.** In my opinion, the potential effects on the environment, including effects in the waters above or beyond the continental shelf, from proposed discharge will be negligible. This is essentially because the volume of any hazardous substances that could be discharged via the drainage system (if any) is very small (at an assumed maximum of 250 ml), and the dilution and dispersion of the substances would be immediate and rapid.
- 36.** As indicated in **paragraph 25, Mr Forrest** has discussed the dilution calculations for the discharge. Mr Forrest notes that the assumed 200 m zone of influence is highly conservative, because it is based on modelling of the discharge of produced water from the FPSO Raroa that has a daily discharge that 1300 times greater than the predicted total daily discharge with the lowest calculated rainfall.<sup>2</sup> In my opinion, in the event that a hazardous substance is spilled on a MODU, and trace elements of the substance are discharged from the MODU following clean-up procedures, the concentrations of the hazardous substances are unlikely to be detectable at 200 m from the MODU (i.e. below 0.01mg/L), and would be at levels below LC 50 immediately upon discharge.
- 37.** In summary, my assessment is that risk of the activity on the environment is negligible. Not only is the risk negligible, but the potential effects of any discharge of trace amounts of harmful substances through the deck drainage, should it occur, would also be negligible.

*Potential effects on existing interests*

- 38.** There are a number of other users/activities within the wider Taranaki Basin, including other offshore oil and gas operations and fishing activities. However, these activities are dispersed over a wide area of the Taranaki Basin.
- 39.** The IA concludes that the groups that have an existing interest within the zone of influence around each of the wells are the deep-water commercial

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<sup>2</sup> Forest statement of evidence, para 58.

fishers and iwi that hold customary fishing rights (and the associated quota holders).<sup>3</sup>

40. With the exception of fishing activities (section 5.5 of the IA), there are no other activities which occur within the direct vicinity of the well locations associated with the application.
41. The cultural environment around each of the well locations is described in Section 5.4 of the IA, which identifies the relevant iwi for each of the well locations and the cultural interest in accordance with the Marine and Coastal Area (Takutai Moana) Act 2011.
42. Given that the potential risk and effects on the environment from the discharge is negligible, it is also my assessment that the potential effects on existing interests, including the potential effects on commercial fishing activities, will also be negligible.

#### *Cumulative impacts*

43. Section 59(2)(a)(i) requires the DMC to take into account cumulative impacts. As part of the ERA, I considered the possibility of up to 12 wells being drilled, possibly with multiple MODUs, and the associated potential discharges of harmful substances.
44. OMV New Zealand is the only operator able to drill within its permit areas so cumulative impacts from other operators is not a possibility. Given the conservative zone of influence identified, any actual physical effects from any harmful substance discharge would be spatially limited around the MODU. In addition, with the large geographic spread between well locations (closest wells are 5 km apart), there is no potential for any overlap of discharged harmful substances from deck drainage between well locations. Accordingly, I assess the potential for cumulative effects from the discharge to be negligible.
45. In addition, and as discussed throughout the IA (in particular Sections 3 and 7) and in Mr Hollinger's evidence, operational procedures and mitigation measures will be in place to prevent the discharge of trace amounts of

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<sup>3</sup> IA, Table 9 at pages 48 and 49.

harmful substances through the deck drainage to avoid any effects on the environment or existing interests as far as practicable.

**Section 59(2)(c) – Effects on human health that may arise from effects on the environment**

46. As outlined within section 59(2A)(a), the EPA must take into account the matters in section 59(2), except (2)(c). Therefore, this subsection is not relevant to this application. However, assessment of the effects on human health of the discharge of harmful substances is required under section (2A)(b) and is discussed further in section 7.3 of the IA and in **Paragraphs 73 to 76** below.

**Section 59(2)(d) – Protection of biological diversity and integrity of marine species, ecosystems, and processes**

47. The existing environment around each of the well locations is detailed within Section 5 of the IA. To further delineate the existing marine environment, the physical environment, biological environment and marine conservation and sensitive sites across the wider Taranaki Basin have been considered for all well locations.
48. The ERA also considered the physical environment, biological environment, marine conservation and sensitive sites across the wider Taranaki Basin. As described above, it is my assessment that any potential adverse effects will be confined to the immediate area of each well location and will be temporary.
49. In addition, as soon as the MODU has demobilised from the drilling location, the risk of any potential effects from a discharge of harmful substance occurring from the deck drainage will be removed. Accordingly, in my view, the application will not compromise the protection of biological diversity and integrity of marine systems, ecosystems, and processes.
50. I consider that the operational procedures, mitigation measures and proposed conditions will also assist in ensuring that biological diversity and the integrity of marine species, ecosystems and processes in the Taranaki Basin are protected.

**Section 59(2)(e) - Protection of rare and vulnerable ecosystems and the habitats of threatened species**

51. There are no rare or unique assemblages within the AOIs that could be influenced by the proposed activity.

**Section 59(2)(g) – The efficient use and development of natural resources**

52. The IA does not specifically provide detail on the efficient use and development of natural resources due to the nature of the proposed discharge that is the subject of this consent application, and the small role the discharge plays in the broader EAD Programme.
53. However, the EAD Programme has the purpose of establishing the presence or otherwise of hydrocarbons, or for determining the nature, location, or size of a hydrocarbon discovery. It is a necessary step towards potentially developing oil and gas resources that might exist in these areas.

**Section 59(2)(h) – The nature and effect of other marine management regimes**

54. Section 7 of the EEZ Act defines a marine management regime as including *'the regulations, rules and polices made and the functions, duties, and powers conferred under an Act that applies to any 1 or more of the following: (a) territorial sea; (b) exclusive economic zone; (c) continental shelf.'*
55. Section 7(2) of the EEZ Act includes a list of other legislation that is incorporated into the broader definition of a marine management regime. Not all of the legislation listed in section 7(2) assists with avoiding, remedying or mitigating the adverse effects of the discharges associated with this activity.<sup>4</sup>
56. This application is for a defined activity that sits within the wider scope of the EAD Programme. The broader drilling programme will be subject to a number of other regulatory approvals, both in accordance with the EEZ Act

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<sup>4</sup> Such as the Continental Shelf Act 1964, the Fisheries Act 1996, the Marine and Coastal Area (Takutai Moana) Act 2011, the Marine Mammals Protection Act 1978 and the Wildlife Act 1953.



and other regulatory regimes, some of which are discussed by **Mr Park** in his evidence.

- 57.** As part of the EAD Programme, the activities that are not regulated under the EEZ Act, but are under other regulatory regimes, include the following:
- (a) Discharges to air and effects on air quality;
  - (b) Navigation safety and vessel movements;
  - (c) Vessel and MODU lighting;
  - (d) Seismic Survey code of conduct for minimising acoustic disturbance to marine mammals;
  - (e) Recreation and tourism activities;
  - (f) Antifouling and biosecurity activities;
  - (g) Float-off and Float-on activities; and
  - (h) Operational health and safety matters
- 58.** As part of the wider EAD Programme, there are an additional four government agencies that operate and administer marine management regimes that are relevant to the overall project. This includes:
- (a) Department of Conservation – which is responsible for marine mammals and protected species within the Taranaki Basin;
  - (b) Maritime New Zealand – responsible for maritime rules for some discharges and oil spills;
  - (c) Ministry for Primary Industries – responsible for managing fisheries within the EEZ and CMA, and biosecurity at New Zealand’s boundaries; and
  - (d) WorkSafe New Zealand – responsible for administering legislation to provide a safe workplace.
- 59.** OMV New Zealand has engaged with these parties as part of the wider EAD Programme and will incorporate particular operational procedures and plans into the project development to confirm compliance with applicable legal requirements of other marine management regimes is achieved. In addition, even though these other legislative requirements are not all of

direct relevance to the discharge that is the subject of this consent application, they still provide various measures to avoid, remedy, or mitigate the adverse effects on the environment and existing interests for the wider EAD Programme.

60. On this basis, as provided above, there are numerous marine management regimes which require approvals and measures to be undertaken to avoid, remedy and mitigate adverse effects from the wider Exploration and Appraisal Drilling Programme. As a result, implementation of these additional measures and approval requirements provide further environmental protections and minimise potential for discharges to the deck and discharges to the environment.

**Section 59(2)(i) – Best practice in relation to an industry or activity**

61. Mr Park, Mr Hollinger and Mr Selischi have each described OMV New Zealand's operations and commitment to professional standards in their evidence. I also understand that OMV New Zealand has committed to undertaking activities within the EAD Programme in accordance with the *'Environmental Best Practice Guidelines for the Offshore Petroleum Industry'*, produced by Ministry for the Environment.
62. Even though these guidelines were largely developed for production and development activities, I understand that OMV New Zealand will follow industry best practice and will adhere to these guidelines as standard operating practice for the duration of the Exploration and Appraisal Drilling Programme.
63. As such I am satisfied that the activities in relation to this application, within the wider EAD Programme, will be undertaken in accordance with best practice.

**Section 59(2)(j) – The extent to which imposing conditions might avoid, remedy or mitigate the adverse effects of the activity**

- 64.** A set of proposed conditions are included in Appendix A of the IA. In my view, the conditions will appropriately manage the potential effects and risk from the proposed activity.
- 65.** The IA defines the operational procedures and measures that will be in place to avoid, remedy or mitigate any spill of harmful substance. The proposed conditions are clear that the activity can only take place in accordance with the application (i.e. the activities outlined in the IA). I consider that the operational procedures and measures identified in the IA will minimise the potential for a spill to occur. However, if a spill did occur the measures in place will further reduce any potential adverse effects on the marine environment.
- 66.** Proposed Condition 7 reflects the requirements OMV New Zealand has specified within the tender documents that the MODU operator must be able to achieve and comply with (i.e. deck drainage system). These measures will further avoid or mitigate any adverse effects on the marine environment.
- 67.** In accordance with the Exclusive Economic Zone and Continental Shelf (Environmental Effects – Discharge and Dumping) Regulations 2015, OMV New Zealand must prepare an Emergency Spill Response Plan (**ESRP**). The ESRP is defined within proposed Conditions 8 and 9 and is further discussed in **paragraphs 94** and **95** below. The implementation of the ESRP will avoid or minimise the discharge of harmful substances from the deck drainage system.
- 68.** I discuss the conditions further under the heading "Risk and Uncertainty" below in **paragraphs 78** to **83**. However, Condition 7 stipulates the minimum design requirements that any MODU contracted by OMV must have in place to minimise adverse effects on the marine environment from deck to will submit all details of the contracted MODU, including up-to-date drawings or plans of the general arrangement, including the deck drainage system. This will ensure that the EPA will be able to review and question any of the systems prior to the EAD Programme taking place.

69. And in the event of a spill occurring, Condition 10 and 11 defines the notification requirements to the EPA, and the implementation of a monitoring programme should it be deemed necessary following discussions with the EPA.

**Section 59(2)(k) and (l) – Relevant regulations and other applicable law**

70. Other statutory regimes which were considered as part of the ERA included are summarised in Section 2.4 of the IA.
71. The IA identifies a number of statutes that are relevant to this activity, namely those listed in **Paragraph 58**.
72. During the development of the IA a number of other legislation and regulations were considered as part of the assessment; however, given the defined scope of the activity within the zone of influence, it was considered that these Acts did not provide any measures to avoid, remedy or mitigate any potential effects from the discharges associated with this application.

**Section 59(2A)(b) – The effects on human health of the discharge of harmful substances if consent is granted**

73. The potential pathways for any human health effects to occur from the activity are limited to direct exposure from any discharge of harmful substance, or from the consumption of fish caught that have been exposed to and contaminated by the discharge of a harmful substance.
74. Each of the well locations are a significant distance from shore (>38 km) and the MODU will have a 500 m Non-Interference Zone in place for the duration it is in New Zealand waters. A conservative 200 m zone of influence has been assumed for any potential discharge of harmful substance from the MODU. Therefore, with the Non-Interference Zone in place, no vessels can enter closer than 500 m, limiting the potential for any physical exposure. Likewise with the distance offshore and the large-scale mixing and dilution that will occur from any deck drainage, any harmful substance discharged is very unlikely to reach the shoreline.

75. An assessment of the commercial fishing activity was provided in Section 5.5.2 of the IA. There is a very low level risk of any commercially caught fish species being exposed to harmful substances that are at concentrations high enough to have any human health effects from the consumption of any fish species.
76. Most fish caught in the areas surrounding the well location are pelagic in nature. Fish which are pelagic in nature essentially means that the fish do not live near the seabed or sea surface, but live within the water column. Pelagic fish are usually agile swimmers capable of swimming long distances, and they are not associated or aggregated in any particular area (i.e. reef), and their distribution is often based on water currents and food supply. As a result, most of the commercially caught fish at each of the drilling locations do not permanently reside in these areas, which further reduces the chance of the fish being exposed to any harmful substances at all.

**Section 59(3)(c) - Any effects on a person's existing interest if the person has given written approval to the proposed activity**

77. OMV New Zealand undertook an engagement process with all existing interests (section 4 of the IA). No written approvals were provided for this activity.

**RISK AND UNCERTAINTY**

78. Under section 61(1), the DMC is required to base its decision on the best available information and to take into account any uncertainty and inadequacy in the information available. Under section 61(2), if the information available is uncertain, the DMC must favour caution and environmental protection.
79. There are two sources of potential uncertainty in the application, which are:
- (a) the MODU or MODUs have not been selected yet; and
  - (b) the particular harmful substances are not known.

80. Given OMV New Zealand has not yet selected a MODU for the EAD Programme, the precise details of the deck drainage system are not yet specified.
81. However, as part of the tender process, I understand that OMV New Zealand has defined strict environmental and operational requirements that any MODU suppliers must comply with. If this is not possible, these suppliers will not progress to the next stage in the contracting process. As such OMV New Zealand expects that any MODU contracted will have a deck drainage system capable of processing the anticipated volumes of rainwater and deluge water during the EAD Programme.
82. OMV New Zealand has proffered Condition 7 to reduce uncertainty through not having a MODU contracted at time of submission. This condition states:
- Any deck drain from a hazard area shall, as a minimum, include the following design requirements:
- (a) Full containment of deck drainage runoff directed to a settlement tank; and
  - (b) Settlement tanks shall have a minimum combined capacity of at least 5 m<sup>3</sup>; and
  - (c) An oil-in-water separator system prior to discharge; and
  - (d) A mechanism for analyzing oil-in-water content prior to discharge from the oil-in-water separator system.
83. I consider that the tender process OMV New Zealand is undertaking, where environmental and operational requirements have been included as part of the tender requirements, as well as proposed Condition 7 appropriately address the perceived uncertainty of OMV New Zealand not having contracted a MODU at this time.

### **Stantec uncertainty report**

84. The EPA commissioned Mr Lieffering from STANTEC to prepare a report to review the uncertainty associated with the application. Mr Lieffering stated that not knowing the exact details of the deck drainage system is not critical<sup>5</sup> and that OMV New Zealand's proffered Condition 7 is sufficient and appropriate to deal with the uncertainty of not knowing the details of the

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<sup>5</sup> Section 6.2 of Stantec Report.

deck drainage system<sup>6</sup>. As set out above, I agree with Mr Lieffering's assessment.

- 85.** As indicated in the IA, given the operational requirements of the MODU, the design of the well to be drilled and the geology of the formation being drilled have not been confirmed at the time of preparing this evidence, the specific harmful substances that will be stored and used on the MODU are not yet known.
- 86.** However, regardless of which harmful substances are onboard, I understand that OMV New Zealand has specified measures as part of the MODU contracting process to minimise and mitigate the contact of rainwater with where the harmful substances are stored and handled. These are:
- (a) the 'sack store' where all harmful substances are stored will be under cover and not exposed to the elements;
  - (b) if any additional space is required above what is available in the 'sack store' all harmful substances would be placed in covered banded pallets<sup>7</sup> to ensure no contact with rainwater;
  - (c) no ecotoxic substances will be stored on the open deck of the MODU; and
  - (d) no harmful substances of any sort will be stored or handled in non-hazard areas.
- 87.** I understand that OMV New Zealand will implement various systems and procedures to reduce the risk of harmful substances entering the deck drainage system in the first place. This includes OMV New Zealand's environmental policies, assurance tasks, staff induction and training, and the use of appropriately located spill kits if a loss of containment of a harmful substance to deck occurred, all of which is discussed in Mr Park's and Mr Hollinger's evidence.

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<sup>6</sup> Section 6.24 of the Stantec Report.

<sup>7</sup> Figure 2 in the IA.

- 88.** A bowtie diagram is provided in the IA<sup>8</sup> which provides a visual schematic of the potential hazards that may possibly occur during the EAD Programme, and the proactive and reactive hazard management systems that will be implemented by OMV New Zealand.
- 89.** Although a specific list of harmful substances that will be stored on the MODU is not available, the IA utilised examples of harmful substances which were guided by those harmful substances that have been used during previous drilling campaigns in the Taranaki Basin.
- 90.** The IA used an assessment of the most ecotoxic harmful substance likely to be used (CI-111) during the EAD Programme, and this was used in the calculations within the IA and as further explained in the evidence of Mr Forrest. However, I note that should a harmful substance spill occur, and it was cleaned up in accordance with the operational procedures in place, the volume of harmful substance residue that may enter the deck drainage system is very low.
- 91.** Based on the low volumes that could potentially enter the deck drainage system, and the large dilution rates that would result, it has been determined within the IA that such a discharge of trace amounts of harmful substance would have a negligible effect on the marine environment. I consider that this negligible effect on the marine environment would result no matter what classification of harmful substance is stored onboard the vessel, given the operational procedures and management measures in combination with the large dilution that would take place in the drainage system and again in the open ocean.
- 92.** Mr Lieffering stated in his assessment of the IA that the uncertainty of not knowing exactly which harmful substances will be stored and used on the MODU, and therefore potentially discharged if a spill occurred, is not critical<sup>9</sup>. Mr Lieffering also recommended that a further 'worst case scenario' is appropriate. Further details around the worst case calculations and assumptions used in the IA for potential discharges from the MODU, as well as responses to Mr Lieffering's comments have been considered in the evidence of Mr Forrest.

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<sup>8</sup> Figure 4 in the IA.

<sup>9</sup> Section 6.19 of the Stantec Report.



93. The IA states that as part of the EAD Programme, OMV New Zealand will *'wherever possible, the least harmful substance that is technically capable of performing the specific role will be selected'*. This is correct; however, I would like to clarify this further, so that this statement is in accordance with the risk management approach taken with the IA. This statement should be amended to say *'wherever practicable, the least harmful substance that is technically capable of performing the specific role will be selected'*. The selection of harmful substances that will be used for the EAD Programme is outside my area of expertise and is covered by Mr Hollinger in his evidence.
94. As part of the wider EAD Programme regulatory requirements, OMV New Zealand will prepare and submit an ESRP to the EPA for review and approval prior to any operations commencing. The ESRP will include the details in relation to the storage and handling of all harmful substances onboard the MODU.
95. I consider that the preparation and implementation of an ESRP will ensure that the discharge of harmful substances from the deck drainage system will be avoided and/or minimised.

#### **FURTHER COMMENT ON EPA REPORTS**

96. I wish to comment on two of the reports prepared in relation to this application, being the EPA's Key Issues Report and Stantec's uncertainty report (I have already commented on aspects of this report in the section above).
97. The Key Issues report identified two key issues that the DMC should consider as part of the decision making process. These are:
- (a) Uncertainty in the application arising from the specific drilling rig not being known at the time of lodging the application; and
  - (b) If the DMC is minded to grant consent subject to conditions, which framework for the classification, consideration and management, of harmful substances is adopted.

98. The uncertainty around the specific drilling rig and the associated deck drainage details is discussed above in **Paragraphs 81 to 84** above.
99. In relation to the classification of harmful substances, Ms Carmona-Noklegaard recommended that the HSNO classification system, as defined by the HSNO Act 1996, is the most appropriate approach to classifying hazardous substances according to their ecotoxicity in New Zealand. I agree with this recommendation.

## **RESPONSE TO SUBMISSIONS**

100. I have reviewed the submissions in relation the OMV New Zealand marine discharge consent application. Rather than addressing each submission individually I have considered them under a series of topics in the sub-headings below. For each of the different topics, the submissions have been summarised and my response is at the end of each sub-heading.
101. I have focused on the submissions by the following submitters:
- (a) Greenpeace New Zealand Incorporated;
  - (b) Climate Justice Taranaki Incorporated;
  - (c) Te Korowai o Nga Ruahine Trust;
  - (d) Lyndon DeVantier;
  - (e) Te Kahui o Taranaki;
  - (f) Te Runanga o Ngati Ruanui; and
  - (g) Te Ohu Kaimoana Trustee Ltd.

### **MODU is yet to be contracted and deck drainage system is unknown**

102. Several submissions have raised concerns about the fact that the final deck drainage system is not known. I have discussed this matter in **paragraphs 81 to 84** above.

In addition, Mr Lieffering has also provided advice to the DMC this issue. Mr Lieffering's advice is summarised in **Paragraph 84** above.

### **Harmful substances that will be stored on the MODU are unknown**

- 103.** A number of submissions raised concerns that the harmful substances that would be stored or used on the MODU are unknown. Based on this, a number of submitters recommended that a decision on the application cannot be made without these details.
- 104.** The EPA commissioned a report on the uncertainties that were in the application, which included not knowing the specific harmful substances that would be used during the EAD Programme. As a result, Mr Lieffering provided advice on this level of uncertainty in relation to making a decision and whether the DMC needed to exercise caution.
- 105.** **Paragraphs 85 to 95** above contain information on this issue.

### **Cumulative effects**

- 106.** I discussed possible cumulative effects at **paragraphs 43 to 45** above. As set out above, I consider the potential for any cumulative effects to occur to be negligible.

### **Effects on cold water corals**

- 107.** Greenpeace New Zealand Incorporated raised concerns in their submission that the impacts of any spill on cold water coral is unknown.
- 108.** I am not aware of any cold water coral distributions in the general proximity of the well locations. The baseline monitoring programme which OMV New Zealand commissioned at each of the proposed well locations did not identify any cold water corals.
- 109.** As discussed throughout the IA, within the Stantec report and Mr Forrest's Statement of Evidence, the dilution factor of a harmful substance from any potential spill entering the marine environment would be large. As such, I consider that all the measures and operational procedures that will be implemented will minimise and mitigate any adverse effects on the marine environment or associated species or communities.

## **Rainfall monitoring**

- 110.** Ngati Ruanui have raised concerns over the source of the rainfall data used within the IA. As a result they have recommended that offshore rainfall data should be collected prior to commencement of the EAD Programme to confirm the accuracy of data within the IA.
- 111.** There is currently no offshore rainfall data for the Taranaki region so a time series of rainfall recording from the Taranaki Regional Council has been used. A data history of ten years' worth of hourly recordings was used for the purpose of the calculations and determining average rainfall values. This data was determined to best represent each of the AOIs and was considered to be the best available information at the time of preparing the IA.
- 112.** The distance between the onshore rainfall monitoring locations and the proposed offshore well locations are not huge (~38-50 km) and for the purpose of the calculations were considered to be representative of approximate rainfall values offshore.
- 113.** However, a slight variation in rainfall amount would not affect the conclusions drawn in the IA, as the amount of rainfall is not the main contributing factor towards environmental effects should a harmful substance spill occur. The operational procedures and mitigation measures that will be implemented onboard the MODU to prevent a spill from occurring, the processes in place to respond to any spill, and then the large dilution that any harmful substance would go through is more important in regards to potential environmental effects in the marine environment.
- 114.** As such, I consider that the use of rainfall data at onshore locations is sufficient for the purposes of the calculations presented in the IA.

## **Notification requirements**

- 115.** Te Ohu Kaimoana's submission suggests that, should a spill of hazardous substances occur, notification should also be provided to fisheries authorities such as Ministry for Primary Industries and also fishery industry bodies.

- 116.** It is not clear from the submission whether Te Ohu Kaimoana is referring to any spill of hazardous substances on the deck (such as the types of spills contemplated by this application), or some other type of spill. In my view, spills onto decks that are then cleaned up, and any resulting discharge of trace elements of hazardous substances through the deck drainage system, do not require notification to fisheries authorities because the potential effects on marine life are negligible.
- 117.** However, OMV New Zealand has proposed condition 11 that address spills of hazardous substances into the sea. That condition includes a mechanism for the EPA and OMV to agree on the agencies and groups to be notified of a spill on a case-by-case basis. In my view, this is an appropriate approach.

#### **Monitoring of fish species**

- 118.** Te Ohu Kaimoana's submission seeks that fish caught in the areas to be drilled should be analysed for contaminants in their flesh prior to drilling and then again afterwards.
- 119.** A fisheries assessment was undertaken for the EAD Programme across a 10 km x 10 km area at each well location over the last five fishing years<sup>10</sup>. This assessment was undertaken by Ministry for Primary Industries and was requested through the Official Information Act. This assessment was not available before this consent application was lodged.
- 120.** The fisheries assessment showed that at all well locations, over the last five years there has been 2,414,557 tonnes of fish caught. Of this amount, 98% of the fish have a pelagic lifestyle (i.e. jack mackerel, barracouta, albacore tuna, frost fish, skip jack tuna) and as such do not aggregate in any particular area – they travel with the water currents and food supply.
- 121.** As a result of the largely pelagic lifestyle of the fish caught surrounding each well location, it is not likely that any of these fish species would come into contact with any harmful substances, should a spill and subsequent discharge occur, that would have any effect on these fish species. In any

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<sup>10</sup> OIA 18-0258.

event, the very small amount of substances that might be discharged is highly unlikely to accumulate in any commercially caught fish.

- 122.** Therefore, I do not consider that conducting tissue analysis tests for contaminants pre- and post-drilling on commercially caught fish species in the Taranaki Basin is necessary or appropriate. Given the extremely unlikely chance that any fish species will come into contact with harmful substances at concentrations that could affect the fish, conducting tissue analysis would not justify the significant expense required to implement such a monitoring programme robustly.

### **Proposed conditions**

- 123.** As part of its submission, Te korowai o Ngaruahine Trust suggested a number of conditions. I consider that the currently proposed conditions and the standards that OMV New Zealand operate to within New Zealand will address most of these concerns.
- 124.** Even though the specific list of harmful substances is not able to be provided for the EAD Programme at the moment, the IA has presented a worst case assessment of what will be stored and used on the MODU. Mr Forrest's evidence further discusses the potential worst case concentrations of the most harmful substance being discharged. Based on this information, of the potential effects from discharge of a harmful substances from the proposed activity to the marine environment can readily be assessed.
- 125.** As part of the wider EAD Programme, OMV New Zealand have committed to ongoing engagement with existing interests, and iwi in particular. Other regulatory applications are currently being prepared and further engagement with existing interests and iwi is also being undertaken through the development of those applications.
- 126.** Te korowai o Ngaruahine Trust have recommended that marine mammal and fish population surveys are undertaken to assess the direct, indirect and cumulative effects of the activity on affected marine species. I have addressed my recommendations for fish surveys within **paragraphs 118 to 122.**

- 127.** In regards to marine mammals, my view is the same as fish surveys as it is for marine mammals. Given most cetaceans in the area will be transiting through the area, they will not be influenced by any potential discharge of a very small amount of harmful substance into the high energy marine environment.
- 128.** Te korowai o Ngaruahine Trust suggest a five year post-activity monitoring programme. As part of the wider EAD Programme marine consent and additional marine discharge consent application, a benthic environmental monitoring programme will be implemented at each well that is drilled. A baseline survey has been undertaken at each of the proposed wells to determine the existing habitat present, and prior to any well being drilled a pre-drill benthic survey will also be undertaken. The benthic surveys will assess benthic sediment physical and chemical characteristics, as well as biological communities, though both qualitative and quantitative methodologies. This monitoring will continue for a period of up to three years post-drilling. However, this monitoring is not related to or necessary for the proposed discharge of trace amounts of harmful substances.
- 129.** In addition, if a spill of harmful substance occurs directly into the sea, proposed condition 11 defines the procedures for the development of any additional monitoring programme in consultation with the EPA, if necessary in the circumstances.

## **SECTION 10 MATTERS AND CONCLUSION**

- 130.** When considering all aspects of the OMV New Zealand application, including the evidence presented by OMV New Zealand's expert witnesses, I consider that the granting of the marine discharge consent application, subject to the proposed conditions, will promote the sustainable management of natural resources and ensure that adverse effects on the environment, including effects on existing interests, are negligible or trivial.
- 131.** I consider that with the operational procedures and management framework that will be in place onboard the MODU or MODUs, as defined with the bowtie diagram in the IA (Section 3.8), that the life-supporting capacity of the environment will be safe-guarded.

**132.** In my assessment, the potential for the natural resource (being the marine environment) to meet the needs of future generations will not be compromised by the proposed discharge of trace amounts of hazardous substances.

**133.** On this basis, I consider that, subject to the imposition of the proposed conditions, I recommend that OMV New Zealand's application can be granted.

A handwritten signature in black ink, appearing to read 'D. Govier', written in a cursive style.

**Daniel Govier**

30 July 2018