Office of the Minister for the Environment Office of the Acting Minister of Energy and Resources

Chair

Cabinet Economic Growth and Infrastructure Committee

Exclusive Economic Zone and Extended Continental Shelf Environmental Effects Legislation Interim Measures and Other Improvements to the Regulatory Regime for Offshore Petroleum

Proposal

- This paper reports back on interim measures to address the potential environmental impacts of activities, including oil and gas activities, in the Exclusive Economic Zone (EEZ) and the Extended Continental Shelf (ECS) that occur before the EEZ and ECS Environmental Effects Bill (EEZ Bill) comes into force. Industry will be asked to comply with these measures voluntarily.
- 2. The paper also notes other actions to improve the regulatory regime for offshore petroleum development.

Executive summary

- 3. The EEZ Bill and regulations are unlikely to come into effect before July 2012. Cabinet has invited the Minister for the Environment and Acting Minister of Energy and Resources to report back on proposed measures to address environmental effects of activities that could occur in the EEZ and ECS before the legislation comes into force.
- 4. The only potential activities for which we consider short term measures are necessary are the drilling of new exploration wells for petroleum¹.
- 5. In addition to the introduction of the EEZ Bill and regulations, there are other longer term actions under way to ensure that the wider environmental, health and safety regulatory regime for petroleum development in the EEZ and ECS reflects best practice and incorporates lessons learnt from the Deepwater Horizon event in the Gulf of Mexico. Officials are investigating:

¹ Petroleum includes oil and gas.

- a) a targeted review of the regulations managing health and safety risks in the offshore petroleum industry;
- b) improving the Department of Labour's (**DOL**) approach to working with the offshore petroleum industry and other high hazard industries; and
- c) a possible increase to the minimum liability insurance cover required under the Marine Protection Rule Part 102.
- 6. The proposed short term environmental measures are designed to:
 - a) manage environmental, and health and safety risks arising from petroleum activities in the EEZ and ECS that occur before the EEZ Bill comes into force:
 - b) give industry and the Environmental Protection Authority (EPA) a chance to develop capacity, build relationships and transition smoothly to the regime proposed under the EEZ Bill by foreshadowing the practices that will soon be required;
 - c) complement and strengthen existing legislative controls that apply to petroleum activities in the EEZ and ECS; and
 - d) be proportionate to the activities and risk of environmental harm during the short term.
- 7. We propose that government request operators to commission an Environmental Impact Assessment (**EIA**) consistent with what will be required when the EEZ Bill comes into force. This EIA will then be voluntarily submitted to the EPA for review before drilling commences.
- 8. Other short term measures are that:
 - a) operators comply with the United States of America's Bureau of Ocean Energy Management, Regulation, and Enforcement Drilling Safety Rule (the Drilling Safety Rule); and
 - b) officials confirm that operators hold liability insurance of at least US\$100 million (we understand that all current offshore operators have liability insurance in excess of US\$100 million compared to the current regulatory requirement to hold approximately NZ\$30 million).

Background

- 9. The EEZ is the area of sea, seabed and subsoil from 12 to 200 nautical miles offshore. The ECS is the seabed and subsoil of New Zealand's submerged landmass where it extends beyond the EEZ. A map of the EEZ and ECS is attached as Appendix 1.
- 10. On 16 May 2011 Cabinet agreed to proceed with the EEZ Bill. The Bill addresses the potential environmental effects not covered by the existing environmental regime in the EEZ and ECS. Cabinet agreed the EPA would be the responsible regulator for the new functions [CAB Min (11) 19/7B].

- 11. The EEZ Bill is Category 4 on the 2011 legislative programme, meaning it must be referred to select committee within the year. The earliest that it is likely the legislation and regulations will come into force is July 2012.
- 12. Cabinet invited the Minister for the Environment and Acting Minister of Energy and Resources, in consultation with other relevant Ministers, to report back by the end of July 2011 with a proposal to address the potential environmental effects of activities, including oil and gas activities, in the EEZ and ECS that occur in the interim period before the legislation and a complete set of regulations come into force [CAB Min (11) 19/7B].
- 13. At the same time we asked our officials, in conjunction with officials from the Ministry of Transport and the Department of Labour, to look into short term actions pending implementation of longer term measures to address other aspects of offshore petroleum development. The longer term measures include the review commissioned by the Ministry of Economic Development in June 2010, a Comparative Review of Health, Safety and Environmental Legislation for Offshore Petroleum Operations (the EHS review), DOL's review of its approach to working with high hazard industries and proposed review of the Health and Safety in Employment (Petroleum Exploration and Extraction) Regulations 1999 and a review by the Ministry of Transport (MOT) of minimum insurance liability requirements.

Existing regime and activities to address

- 14. The drilling of new petroleum exploration wells is the only significant activity which may occur in the EEZ or ECS before the EEZ Bill comes into force for which the environmental effects are not comprehensively managed by existing legislation.
- 15. We estimate that two to four new wells are likely to be drilled in the interim period, out of the 18 petroleum exploration permits in the EEZ under which drilling could potentially take place. This is based on the progress of the operators through their work programmes², whether they have sourced a drilling rig, and whether they have made commitments to drill.

Activities for which no additional environmental controls are required in the short term

- 16. The environmental impacts of fisheries activities and any bioprospecting in the EEZ and ECS are already regulated under the Fisheries Act 1996.
- 17. Marine pollution issues such as discharges from ships and offshore installations, and dumping of waste such as dredged material and drill cuttings, are covered by Marine Protection Rules under the Maritime Transport Act 1994.

² Given the cost of drilling a well, operators are unlikely to drill a well until they have the best information available to them from exploration activities such as seismic surveying. A number of the permits are at an earlier stage in the work programme, so while they could potentially drill a well, they are unlikely to do so in the near future.

- 18. There are adequate environmental conditions for minerals licences in the EEZ, set under the Continental Shelf Act 1964. These include requirements for EIAs, environmental monitoring programmes, and provisions for recovering costs of the independent review of these documents from the licensee. Any further licences granted in the interim period will have equivalent environmental conditions. To avoid duplication, environmental conditions will be dealt with under the EEZ Bill once it comes into force.
- 19. Other activities such as aquaculture, marine energy generation, and carbon capture and storage are highly unlikely to occur in the EEZ or ECS during the interim period. If these activities do occur in the short term, then suitable interim measures will apply.
- 20. The only other activity that may occur is the laying of international cables on the seabed. Under Article 79(1) of the United Nations Convention on the Law of the Sea, all States have the right to lay submarine cables on the seabed of the EEZ or ECS. New Zealand cannot impede the laying of submarine cables unless it unreasonably interferes with our exploration or exploitation of the seabed resources in our EEZ or ECS (Article 79(2)). Given the limitations under international law to regulate the laying of cables and the low probability that during the interim period a conflict would arise between New Zealand's exploitation operations and the laying of a new cable, we do not propose interim measures in this area.

Current health, safety and environmental legislation for offshore petroleum operations in the EEZ and ECS

- 21. The regulation of the potential environmental effects of petroleum activities in the EEZ and ECS is covered directly by the discharge management and oil spill response regulatory regime and indirectly by the health, and safety regulatory regime. As a general overview the wider environmental, health and safety regulatory regime (EHS regime) encompasses:
 - a) a safety case regime³ that addresses hazards posed by well-drilling operations, managed under health and safety regulations under the Health and Safety in Employment Act 1992
 - b) management of the risk of discharges, including oil spills, under the Maritime Transport Act 1994
 - c) oil spill response services operated by Maritime New Zealand under the Maritime Transport Act 1994
 - d) requirements for minimum liability insurance under the Maritime Transport Act 1994.
- 22. A comprehensive overview of New Zealand's EHS regime for offshore petroleum operations is provided as Appendix 2.

³ A safety case identifies the hazards and risks of operations; describes how the risks are controlled; and describes the safety management system in place to ensure the controls are effectively and consistently applied.

23. The EHS review referred to above found that the regime is largely fit for purpose and incorporates a number of key aspects of international best practice⁴. The introduction of EEZ and ECS legislation with the EPA as the responsible regulator will address the major legislative gap identified in the review. The legislation will not come into force before 1 July 2012.

Objectives

- 24. The objectives for any short term measures are to:
 - a) manage the environmental and health and safety risks arising from petroleum activities in the EEZ and ECS that occur before the EEZ Bill comes into force, and before the DOL review of health and safety regulations is completed and appropriate recommendations implemented;
 - give industry and the EPA a chance to develop capacity, build relationships and transition smoothly to the regime under the EEZ Bill by foreshadowing the practices that will soon be required;
 - c) complement and strengthen existing legislative controls that apply to petroleum activities in the EEZ and ECS; and
 - d) be proportionate to the activities and risk of environmental harm during the short term.

Proposed short term measures

- 25. The proposed measures focus on the drilling of new petroleum exploration wells. They include interim measures to address the gap in environmental regulation before the EEZ legislation comes into effect, as well as interim measures to improve the wider EHS regime for offshore petroleum development. The measures include:
 - a) government requesting that operators undertake an EIA (at the operator's expense) consistent with what will be required when the EEZ Bill comes into force and submit the EIA to the EPA;
 - b) the EPA reviewing such EIAs (at government expense) before drilling commences;
 - c) requesting that operators comply with the United States of America's Bureau of Ocean Energy Management, Regulation, and Enforcement Drilling Safety Rule (the Drilling Safety Rule); and
 - d) confirming that all current offshore operators have liability insurance in excess of \$US100 million for offshore installations.

⁴ The EHS Review found that New Zealand's regime already incorporates a number of the key characteristics and with one exception (the lack of an environmental permitting regime in the exclusive economic zone) no major gaps or serious omissions were identified.

- 26. Measures a) and b) are consistent with what is likely to be required of operators when drilling exploration wells once the EEZ Bill comes into effect. This allows both industry and the EPA to trial the proposed regime. The proposed requirements for the EIA are set out in Appendix 3.
- 27. Under the EEZ Bill the costs of review of the EIA will be recovered from operators. As the EIA measures for the interim period are voluntary and require industry cooperation, we consider it more appropriate for government to bear the costs of the review in the interim period to make them more palatable to industry. Considering the anticipated scale of activities, this is unlikely to be of significant cost to government in the interim period. We estimate a maximum of \$60,000 over the interim period.
- 28. Operators would incur costs for the preparation of an EIA only if they had not already prepared one. Large international operators prepare an EIA as a matter of best practice. An indicative range for the preparation of a new EIA is from approximately \$25,000 up to \$100,000 in areas where the baseline environment is unknown.
- 29. The EPA will decide its own process for reviewing any EIA provided. The EPA may seek independent advice from the Māori Advisory Committee or other independent experts.
- 30. Measure c) is an interim measure before any recommendations from DOL's proposed review of the health and safety regulations are implemented. DOL will request that operators voluntarily adopt relevant parts of the Drilling Safety Rule for this summer's drilling season (from September 2011). DOL will recommend that operators and inspection bodies regard this rule as part of the evolving accepted industry practice for deepwater drilling safety.
- 31. The Drilling Safety Rule was developed as part of broader reforms to address safety concerns raised by the Deepwater Horizon incident in the United States of America. The Drilling Safety Rule requires proper cementing and casing practices and the appropriate use of drilling fluids in order to maintain wellbore integrity, the first line of defence against a blowout. It also strengthens oversight of well control equipment designed to shut off the flow of oil and gas, primarily the blowout preventer and its components. The rule will supplement existing measures by requiring parties to have their well casing and cementing programme and certain well control equipment components verified by an independent expert.
- 32. Evidence that the operator was adhering to the Drilling Safety Rule could be provided in the well drilling notice that operators supply to DOL 20 days before drilling occurs. If an operator refuses to comply with relevant parts of the Drilling Safety Rule then DOL may take enforcement action as the operator has failed to take all practicable steps to ensure the safety of employees while at work, in accordance with the general duties placed on employers under the Health and Safety in Employment Act 1992. If non-compliance is of a serious nature, or it represents a likelihood of serious harm to any person, a prohibition notice could invoke a partial or total shutdown of the installation.
- 33. Although both the EIA and Drilling Safety Rule will be voluntary during the interim period, there are strong incentives for industry compliance. Operators are concerned to

protect their public image and will be unlikely to ignore government recommendations on health, safety and the environment, despite the fact that compliance is voluntary.

34. The current minimum liability insurance under the Maritime Transport Act 1994 is approximately NZ\$30 million, and MOT has undertaken preliminary work establishing levels of liability insurance held by current operators. We understand that all current operators hold liability insurance in excess of US\$100 million. Until a higher level of insurance is required by regulation, some of the risk to the Crown of the current minimum level is reduced by the level of liability insurance that operators choose to hold.

Other options considered

- 35. The options for short term measures discussed briefly below were assessed against the objectives listed in paragraph 25. A number of the options considered were found to be not fit for purpose.
- 36. Doing nothing does not meet the objectives of managing the potential environmental effects of activities in the EEZ and ECS during the interim period or easing transition to the new regime.
- 37. The addition of environmental or health and safety conditions to permits under the Crown Minerals Act 1991 is also unsuitable. Permit conditions can only be amended with the consent of permit holders and this option would be inconsistent with the separation of the functions of resource allocation, environmental regulation, and health and safety regulation. However MED will consider, as part of the review of the Crown Minerals Act 1991 regime, whether it is appropriate for New Zealand Petroleum & Minerals to take the past health, safety and environmental record of an applicant into consideration as part of the application process.
- 38. A moratorium on drilling or voluntary postponement of activities, while recommended by environmental groups, is considered disproportionate to the risk. Operators would be unlikely to willingly halt activities given the pre-existing drilling commitments and the amounts of money already invested in their activities. If a moratorium were to be imposed in New Zealand, investor confidence would be irreparably damaged. Several petroleum operators indicated that if a moratorium were enforced their company might leave New Zealand.

Consultation with industry

- 39. These short term measures are voluntary. Officials have consulted the operators expected to drill in the interim period regarding the EIA. These operators were supplied with the proposed requirements for the EIA and are generally supportive of the voluntary interim measures provided the time requirements for presenting the assessments are adequate.
- 40. We understand that companies operating in jurisdictions where the Drilling Safety Rule is currently required, such as the United States of America, will be comfortable with applying the Drilling Safety Rule. DOL will undertake more detailed consultation on the

- Drilling Safety Rule in August 2011 and will seek compliance from all operators as part of accepted industry best practice for deepwater drilling.
- 41. Regarding a possible increase to operators' minimum liability insurance for offshore installations, MOT has canvassed the idea with current offshore operators. We understand that current operators hold liability insurance well over the existing minimum requirement of approximately NZ\$30 million, and increasing the minimum to NZ\$100 NZ\$200 million would not result in difficulties or additional costs to industry.

Proposed long term health and safety improvements

42. The EHS review found that the health and safety legislation in New Zealand is largely fit for purpose, but recommended that DOL investigate ways in which consideration of safety cases might be enhanced. It noted the need to ensure that the available resourcing and expertise to operationalise this legislation was sufficient, particularly should there be an increase in offshore petroleum activities in New Zealand.

Proposed review of regulations

- 43. DOL plans to review the regulations managing health and safety risks in the offshore petroleum industry; the Health and Safety in Employment (Petroleum Exploration and Extraction) Regulations 1999. This review is expected to focus on wellbore integrity, well control equipment and ways in which consideration of safety cases might be enhanced. This review will take into account international findings in response to events such as the Deepwater Horizon event.
- 44. DOL considers that the recommendations from this review can be implemented before the drilling season of 2012/2013 (by September 2012).

Longer term proposals for improving DOL's work with the petroleum industry

- 45. DOL recently completed an internal review of its work with the petroleum industry and other high hazard industries and is now working through practical proposals for improving its approach, including:
 - a) establishing a nationally-led team to improve the coordination, planning, and relationship management for DOL's inspection and enforcement work within highhazard industries;
 - recruiting additional petroleum expertise, and better utilising DOL's general workplace inspection resources, to improve DOL's inspection and enforcement capacity;
 - c) entering a contractual arrangement with Australia's National Offshore Petroleum Safety Authority (NOPSA) to improve DOL's access to technical expertise; and
 - d) improving the collection and use of information, and facilitating greater sharing of this information, to support effective relationships with other regulators.

Agreement with the Australian National Offshore Petroleum Safety Authority

46. The relationship with NOPSA is progressing well. The contractual relationship to draw on NOPSA's technical expertise requires a change to Australian legislation. A package of Bills which relate to the transformation of NOPSA into the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) is currently being considered by the Australian House of Representatives. The proposed changes include the ability for NOPSEMA to undertake work for other jurisdictions on a cost recovery basis.

Long term minimum liability insurance requirements

- 47. MOT has responsibility for administering the Maritime Transport Act 1994 and Marine Protection Rules that require offshore installations to hold a minimum level of liability insurance to protect the Crown in the event of an accident or discharge of oil into the environment.
- 48. Currently, section 8(2)(b) of Marine Protection Rule 102 sets the minimum liability insurance cover that must be held by an offshore installation at 14 million International Monetary Fund Units of Account, which equates to about NZ\$30 million.
- 49. From a New Zealand risk mitigation perspective, the 2009 Montara oil well blowout in Australian waters is a good model. That blowout cost the platform operator AUS\$170 million. The Australian Marine Safety Authority costs were AUS\$11 million, which were reimbursed by the operator. It may be appropriate for New Zealand's minimum liability insurance requirements to be sufficient to meet the costs of an event such as Montara (a moderate to serious well blowout event).
- 50. MOT has undertaken initial work to ascertain the current level of liability insurance held by offshore oil exploration operators. All have indicated that they hold liability insurance well in excess of the current minimum requirement (NZ\$30 million) and would not have difficulties or additional costs if government raised this figure to NZ\$100 - NZ\$200 million.
- 51. If the government wishes to raise this minimum liability insurance requirement, MOT would need to undertake further work and consult again with industry. Any change would require an amendment to Marine Protection Rule Part 102 and this change could potentially occur by July 2012.

Publicity

- 52. We propose a joint post Cabinet press release that:
 - a) the government will be requesting that operators undertake an EIA (at the operator's expense) consistent with what will be required when the EEZ Bill comes into force and submit the EIA to the EPA;
 - b) the EPA will review those EIAs (at government expense) before drilling commences;

- c) operators will need to comply with the United States of America's Bureau of Ocean Energy Management, Regulation, and Enforcement Drilling Safety Rule (the Drilling Safety Rule) implemented following the Deepwater Horizon event; and
- d) all current offshore operators have liability insurance in excess of \$US100 million for their offshore installations.
- 53. Following Cabinet decisions, we also propose releasing this paper, subject to any deletions that would be justified if the information had been requested under the Official Information Act 1982.
- 54. Information and processes for voluntary EIAs will be published on the Ministry for the Environment and EPA websites. The Drilling Safety Rule will be published on the DOL website.

Consultation

- 55. This paper has been developed in consultation with the following agencies: Department of Labour, Ministry of Transport, Department of Conservation, Ministry of Fisheries, Maritime New Zealand, Te Puni Kōkiri, Ministry of Foreign Affairs and Trade, Ministry of Justice, Ministry of Agriculture and Forestry, State Services Commission, Treasury, Ministry of Defence, Department of Internal Affairs, Ministry of Science and Innovation, the Environmental Protection Authority.
- 56. The Department of Prime Minister and Cabinet has been informed of the proposals in this paper.
- 57. The Petroleum Exploration and Production Association of New Zealand was consulted in the course of developing this paper as were petroleum exploration companies.

Financial implications

- 58. These proposals will result in additional costs to operators in relation to:
 - a) the preparation of any new EIA (this will be voluntary and is estimated at NZ\$25,000 to NZ\$100,000 for each EIA)
 - b) compliance with the Drilling Safety Rule (this will be voluntary).
- 59. Additional costs will be incurred by the EPA in reviewing any EIA provided to it during the interim period. The EPA will not be able to recover this cost therefore funding will come from existing baselines. Costs will depend on the number of EIAs provided for review during the interim period; we estimate a maximum of \$60,000 in total.

Human rights

60. The proposals in this Cabinet paper appear to be consistent with the New Zealand Bill of Rights Act 1990 and the Human Rights Act 1993. The Ministry of Transport, Ministry for the Environment, Ministry of Economic Development and the Department of Labour will consult with the Ministry of Justice to ensure further policy work is consistent with the New Zealand Bill of Rights Act.

Legislative implications

61. There are no legislative implications at this stage. If the Minister of Transport decides to increase the minimum liability insurance cover for offshore installations a change to the Marine Protection Rules will be required.

Regulatory impact analysis

62. The regulatory impact analysis requirements do not apply to the voluntary measures of this proposal.

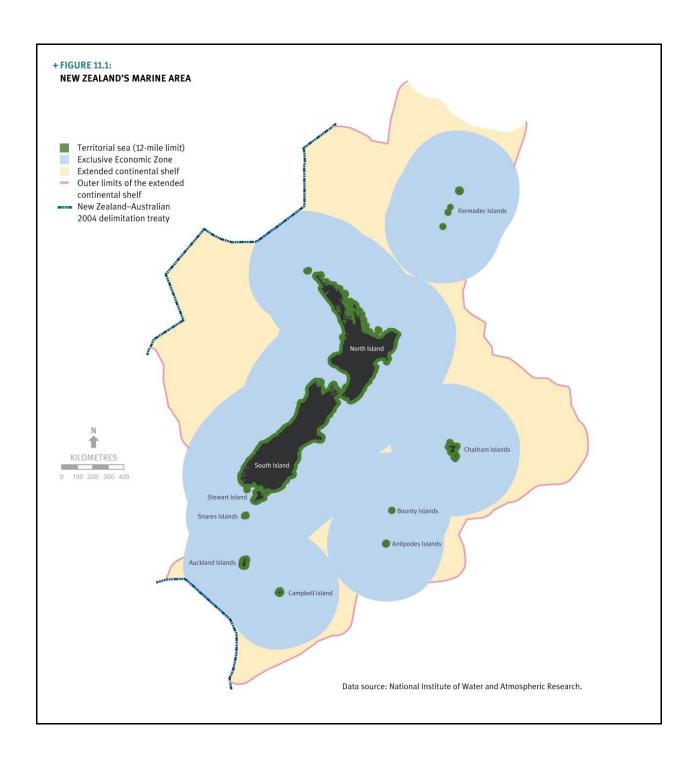
Recommendations

- 63. The Minister for the Environment and Minister of Energy and Resources recommend that the Committee:
 - note that Cabinet has invited the Minister for the Environment and Acting Minister of Energy and Resources, in consultation with other relevant Ministers, to report back by the end of July 2011 with a proposal to address the potential environmental effects of activities, including oil and gas activities, in the exclusive economic zone (EEZ) and extended continental shelf (ECS) that occur before the legislation and a complete set of regulations come into force [CAB Min (11) 19/7B]
 - 2. note that July 2012 is the earliest date that the Exclusive Economic Zone and Extended Continental Shelf Environmental Effects legislation and regulations could come into force
 - 3. agree that exploratory drilling for petroleum is the only activity in the EEZ and ECS for which interim measures are appropriate to address the potential environmental, effects
 - 4. agree that operators will be requested to prepare an Environmental Impact Assessment (EIA) consistent with what will be required by the EEZ Bill and that operators submit any EIA prepared to the EPA for review
 - 5. agree that the EPA's costs for reviewing an EIA during this period will be reallocated from existing baselines
 - 6. note that the Department of Labour will request that operators comply with the United States of America's Bureau of Ocean Energy Management, Regulation, and Enforcement Drilling Safety Rule
 - 7. note that the Department of Labour will undertake a review of the Health and Safety in Employment (Petroleum Exploration and Extraction) Regulations 1999 with implementation of recommendations expected in 2012
 - 8. note that the Department of Labour has undertaken a review of its work with the petroleum industry and other high hazard industries and is now working through practical proposals for improving its approach

- 9. note that officials have confirmed that operators have minimum liability insurance of US\$100 million for offshore installations
- 10. invite the Minister of Transport to direct the Ministry of Transport to undertake further work on increasing minimum liability insurance for offshore installations
- 11. agree that a joint statement be released signalling government intentions to develop both short term measures and long term improvements to existing controls for petroleum exploration in the EEZ and ECS
- 12. agree to releasing this paper, subject to any deletions that would be justified if the information had been requested under the Official Information Act 1982

on Dr Nick			
linister for t			

Appendix 1: Map of New Zealand's Exclusive Economic Zone and extended continental shelf



Health & Safety

High level consideration of Health & Safety matters when new petroleum exploration and mining permits are sought. This could involve NZP&M (following advice from other agencies) taking explicit account of companies' Health & Safety records in NZ and abroad when deciding whether to grant permits. This matter is proposed to be addressed as part of the expanded CMA Review, which is proposed to be concluded over a 12 month timeframe with legislation introduced by late 2012.

The petroleum operation must be designed and constructed in accordance with the appropriate parts of the Institute of Petroleum Model Code of Safe Practice. If the code is not applicable to any part of the operation, then the operator must ensure that the petroleum operation is designed and constructed in accordance with generally accepted and appropriate industry practice (such as those from the American Petroleum Institute).

Operators must prepare a **Safety Case** for the *design and construction* of any fixed or mobile structure or vessel used, or intended to be used, in any offshore petroleum operation. This includes any wells and associated plant, and any pipe or system of pipes (within 500m of the structure or vessel).

Essentially, the safety case identifies the hazards and risks, describes how the risks are controlled, and describes the safety management system in place to ensure that the controls are effectively applied. It should include a description of any wells or pipelines to be connected to the installation, and a description of the methods to isolate petroleum contained in these wells or pipelines from the installation.

A copy must be sent to DoL at least 2 months before construction starts. The safety case is reviewed by DoL's petroleum specialist to ensure that the risks are reduced to as low as reasonably practicable. If DoL's petroleum specialist identifies any problem/issue, he will discuss this with the operator for them to clarify or make the necessary changes and then re-submit a revised safety case (if required).

DoL does not formally approve the safety case. However, if the operator refuses to address issues raised by DoL then enforcement action may be taken on the basis of the operator's failure to take all practicable steps in the general context of the Health and Safety in Employment Act 1992 (the HSE Act).

An operator can only undertake the activities provided for in the safety case and must take all practicable steps to ensure that the installation is constructed in a manner which is consistent with the safety case.

Dol's petroleum specialist visits installations to monitor the ongoing implementation and compliance with the safety case. If non-compliance is of a minor nature and it does not immediately endanger any person, Dol's petroleum specialist might agree with the operator on ways for them to become compliant without having to use an enforcement tool. If non-compliance is of a serious nature, or it represents a likelihood of serious harm to any person, Dol's petroleum specialist is more likely to use a statutory enforcement tool - prohibition notice, infringement notice, or prosecution. A prohibition notice could invoke a partial or total shutdown of the installation.

Operators drilling deepwater exploration wells will be encouraged to comply with the **Drilling Safety Rule** issued by BOEMRE. This Rule was developed as part of a broader series of reforms in the US to address the central safety concerns raised by the Deepwater Horizon incident. It will be adopted in NZ as part of a package of (voluntary) short-term measures that will manage environmental and health & safety risks from petroleum activities in the EEZ before the EEZ Bill comes into force and before DoL's review of the regulations that apply to this activity is complete.

DoL will recommend that operators and inspection bodies regard this Rule as part of the evolving accepted industry practice for deepwater drilling safety and that it should be adopted from this summer's drilling season.

Requirements include third party verification that the casing and cementing programme is appropriate under expected wellbore pressures, and BOP blind-shear rams are capable of cutting any drill pipe under maximum anticipated surface pressure.

If an operator refuses to comply with the Drilling Safety Rule then enforcement action may be taken on the basis of the operator's failure to take all practicable steps in the general context of the HSE Act.

The petroleum operation must be operated and maintained in accordance with the appropriate parts of the **Institute of Petroleum Model Code of Safe Practice**. If the code is not applicable to any part of the operation, then the operator must ensure that the petroleum operation is operated and maintained in accordance with generally accepted and appropriate industry practice (such as those from the American Petroleum Institute).

DoL's petroleum specialist visits installations to monitor compliance with this requirement. If non-compliance is of a minor nature and it does not immediately endanger any person, DoL's petroleum specialist might agree with the operator on ways for them to become compliant without having to use an enforcement tool. If non-compliance is of a serious nature, or it represents a likelihood of serious harm to any person, DoL's petroleum specialist is more likely to use a statutory enforcement tool (prohibition notice, infringement notice, or prosecution).

Operators must prepare a **Safety Case** for the *operation* of any fixed or mobile structure or vessel used, or intended to be used in any offshore petroleum operation. A copy must be sent to **DoL** at least <u>2 months</u> before operations commence. (*Refer to 'Safety Case – Design & Construction' above for further details*).

Operators cannot operate without a current **certificate of fitness** issued by an inspection body (appointed by the Secretary of Labour) or, alternatively, an onsite **verification scheme**. The certificate of fitness is issued in respect of the safety of the fixed or mobile structure or vessel used, or intended to be used, in any offshore petroleum operation. This includes any wells and associated plant, and any pipe or system of pipes (within 500m of the structure or vessel). It also includes all equipment necessary for the safe operation of the installation.

A copy of the certificate of fitness must be sent to **DoL** at least <u>1 month</u> before the commencement of operations.

The installation no longer complies with the certificate of fitness if it sustains damage or shows signs of deterioration that could affect the integrity of the installation or equipment, or is structurally modified or replaced. The operator must then cease operations unless the inspection body allows the operator to continue with reasonable limitations and conditions.

DoL's petroleum specialist visits installations to monitor compliance with these requirements. If non-compliance is of a minor nature and it does not immediately endanger any person, DoL's petroleum specialist might agree with the operator on ways for them to become compliant without having to use an enforcement tool. If non-compliance is of a serious nature, or it represents a likelihood of serious harm to any person, DoL's petroleum specialist is more likely to use a statutory enforcement tool.

Prospecting Permit allocation

Acquisition of geological & geophysical data

Exploration or Mining Permit allocation

Geological & geophysical surveying (Exploration activity)

Design & construction

Environment

High level consideration of environmental matters when new petroleum exploration and mining permits are sought. This could involve NZP&M taking explicit account of companies' environmental records in NZ and abroad when deciding whether to grant permits. This matter is proposed to be addressed as part of the expanded CMA Review, which is proposed to be concluded over a 12 month timeframe with legislation introduced by late 2012.

Guidelines for Minimising Acoustic Disturbance to Marine Mammals from Seismic Survey Operations (**DoC**). The guidelines are endorsed by PEPANZ.

(Pre) Operations

Operators will be asked to complete an **Environmental Impact Assessment** (EIA) and submit the EIA to the **Environmental Protection Authority (EPA)** for review <u>before drilling commences</u>.

This is an interim measure that will apply to exploration drilling in the Exclusive Economic Zone (EEZ) before the proposed EEZ and Extended Continental Shelf Environmental Effects legislation comes into force.

Once the legislation comes into force a similar process will be followed and an EIA required. There will be a full public process and the operations will only commence with the consent of the EPA.

Operators are required to submit a **Discharge Management Plan (DMP)** to **Maritime NZ** at least <u>2 months</u> before commencement of operations.

Maritime NZ must approve the plan before operations commence.

The plan must provide information on:

- oils stored on the installation
- oils produced by the installation
- the likely fate of spilled oil
- description of all the on board processes and activities which present a risk of pollution
- all identified potential environmental impacts resulting from a spill from the installation.

The plan must contain emergency spill response procedures, including:

- guidance on safety of personnel
- guidance on actions to stop, minimise and mitigate the effects of a spill
 details of response options available to the installation
- procedures to report marine oil spills by the fastest means of communication available to the director (or regional council if spill occurs is in a region – within 12 miles of the coast)
- duties of personnel responsible for dealing with spills.

The owner of the installation:

- must ensure personnel assigned responsibilities for dealing with spills are appropriately trained before commencing operational duties and must keep records of the training carried out
- maintain access to equipment to deal with a spill
- justify to the Director of Maritime NZ, if called on to do so, any spill response option in the discharge management plan as effective and achievable
- test emergency response procedures not less than once every 12
 months
- review the effectiveness of response procedures ASAP after tests, or their use in responding to a spill, record the result and notify the Director of Maritime NZ. Any modifications to increase DMP effectiveness must be submitted to the Director of Maritime NZ for approval and then implemented.

The Secretary of Labour may allow an operator to operate a **verification scheme**. If the Secretary approves the verification scheme, then the operator does not have to comply with the certificate of fitness requirements. The operator must appoint an independent competent person(s) to carry out the verification work. The Secretary may withdraw recognition of a verification scheme if it is appropriate to do so.

The operator must maintain records showing the examination and testing carried out, the findings, remedial action recommended, and remedial action performed.

Dol's petroleum specialist checks these records, when visiting installations, to monitor compliance with these requirements. If non-compliance is of a minor nature and it does not immediately endanger any person, DoL's petroleum specialist might agree with the operator on ways for them to become compliant without having to use an enforcement tool. If non-compliance is of a serious nature, or it represents a likelihood of serious harm to any person, DoL's petroleum specialist is more likely to use a statutory enforcement tool.

Operators must notify **DoL** at least <u>20 days</u> before they commence any well drilling operation. The **well drilling notification** includes the casing programme and the proposed drilling fluids – both of which maintain wellbore integrity (the first line of defence against a blowout). The notification must also include particulars of the well control equipment to be used.

The notification is reviewed by DoL's petroleum specialist to ensure that it complies with the appropriate parts of the Institute of Petroleum Model Code of Safe Practice, or American Petroleum Institute standards, or that it is in accordance with generally accepted and appropriate industry practice. If DoL's petroleum specialist identifies any problem/issue, he will discuss this with the operator. The operator may be required to submit a revised notification. If the operator does not make changes in accordance with the advice provided by DoL then enforcement action could be taken on the basis of the operator's failure to take all practicable steps in the general context of the HSE Act.

Operators must take all practicable steps to develop **emergency procedures**. These must be submitted to **DoL** <u>before the commencement of operations</u>.

Operators must notify **DoL** at least <u>24 hours</u> before they intend to **discharge petroleum** vapours or gases (which may require flaring)

Operators must <u>immediately notify</u> **DoL** of: any **failure of any part of the primary pressure containment system of the well**; and the steps that the employer propose to take in order to remedy such failure.

Operators must send copies of the daily records for the well-drilling operation to **DoL**. They must also provide DoL with a copy of the summary report once the well is completed.

Inspections are used to monitor compliance with the HSE Act and relevant regulations and ongoing implementation and compliance with safety cases.

The subject of planned inspections will include both control and management of Major Accident Events and Occupational Health and Safety. There will be at least one inspection per year for each manned installation, where practicable. This is consistent with the level of inspections undertaken by the Australian regulator.

If non-compliance is of a minor nature and it does not immediately endanger any person, DoL might agree with the operator on ways for them to become compliant without having to use an enforcement tool.

If non-compliance is of a serious nature, or it represents a likelihood of serious harm to any person, DoL's petroleum specialist is more likely to use a statutory enforcement tool.

The petroleum operation must be abandoned in accordance with the appropriate parts of the Institute of Petroleum Model Code of Safe Practice. If the code is not applicable to any part of the operation, then the operator must ensure that the petroleum operation is abandoned in accordance with generally accepted and appropriate industry practice(such as those from the American Petroleum Institute).

Dol's petroleum specialist visits installations to monitor compliance with this requirement. If non-compliance is of a minor nature and it does not immediately endanger any person, Dol's petroleum specialist might agree with the operator on ways for them to become compliant without having to use an enforcement tool. If non-compliance is of a serious nature, or it represents a likelihood of serious harm to any person, DoL's petroleum specialist is more likely to use a statutory enforcement tool.

Operators must prepare a **Safety Case** for the *abandonment* of any fixed or mobile structure or vessel used in any offshore petroleum operation. A copy must be sent to **DoL** at least <u>2 months</u> before abandonment commences. (Refer to 'Safety Case – Design & Construction' for further details).

Operators must **notify DoL** at least <u>20 days</u> before they **suspend** any well drilling operation or **abandon** any well.

Containment Contingency Plan

Operators will be required to provide **Maritime NZ** with a contingency plan (as part of their discharge management plan) that details how they intend to reduce (and ultimately stop) the flow of oil and gas to the environment during a well control event.

The Director Maritime NZ will need to issue a revised circular to Part 200 to implement this change (which could be done in 20 days).

Operators have **public liability insurance** sufficient to meet their obligations under the *Maritime Transport Act (MTA)* in relation to pollution of the marine environment. For offshore installations the minimum level of insurance is currently approximately **NZ\$30 million**. Current operators in NZ have confirmed that confirmed they hold liability insurance in the range **of \$US100 to \$US200 million**. The MTA also provides that third parties – the Crown, Maritime New Zealand, regional councils, and port companies who may incur costs in cleaning up oil spills or taking preventive measures, as well as property owners who suffer pollution damage – can proceed against the liability insurer.

Operations

(Pre) Operations

Operators are **audited** by **Maritime NZ** for compliance with their *approved discharge management plan* and prescriptive requirements in the marine protection rules made under the Maritime Transport Act, including the oil content of production water discharges, and international oil pollution prevention certification in accordance with the MARPOL convention (the International Convention for the Control of Pollution from Ships).

The owner of the installation must conduct an **environmental monitoring programme** to detect marine environmental impacts arising from discharges using methods approved by the Director of **Maritime NZ**.

Abandonment

Operators must apply to the Director **Maritime NZ** for a **dumping permit** for the final disposal of an offshore installation at sea under the Maritime Transport Act 1994 and marine protection rule Part 180. The Director must assess the application in accordance with the requirements of the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Waste and other Matter.

Major Accident Event Response

- In the event of a **Major Accident Event** the operator will implement their emergency procedures to help or rescue injured or endangered personnel, maintain the safety of the installation or persons at the installation, reduce the danger to the installation or persons at the installation, and retrieve or attempt to retrieve the bodies of the deceased.
- If primary well containment is lost, and the blowout preventer fails to contain the flow of oil into the environment, then the operator will need to notify the **Rescue Coordination Centre New Zealand** and take immediate steps to control the spill. The Rescue Coordination Centre is a dedicated 24/7 service (contact means include phone, email, radio and fax) that is operated by **Maritime NZ**.
- > If the spill is outside the Territorial Sea, and beyond the capability of the operator to respond, then control of the response passes directly to Maritime NZ.
- In addition to the powers of an on-scene commander in charge of an oil spill response, the Director of Maritime NZ has wide-reaching powers to issue instructions and take measures in respect of an offshore installation that is discharging, or is likely to discharge oil, to avoid, reduce, or remedy pollution, or a significant risk of pollution.
- The National Marine Oil Spill Response Strategy identifies the role and responsibilities of the operator, Maritime NZ, local government, and other agencies in response to a major offshore incident. For example, DoL seconds its senior specialist (petroleum) resource to the response team.
- New Zealand has a formal agreement with Australia to provide assistance should it be needed. There are also other arrangements where New Zealand would be able to call on specialist resources from international companies.

Appendix 3: EIA information requirements

An environmental impact assessment must:

- (a) describe the activity for which consent is sought; and
- (b) describe the state of the local environment prior to the activity being undertaken; and
- (c) identify the actual and potential effects of the activity on the environment and existing interests, including any conflicts with existing interests; and
- (d) identify persons whose existing interests are likely to be adversely affected by the activity; and
- (e) describe any consultation undertaken with persons described in paragraph (d) and specify those who have given written approval to the activity; and
- (f) include copies of any written approvals to the activity; and
- (g) specify any possible alternative locations or methods for undertaking the activity to avoid, remedy, or mitigate any adverse effects; and
- (h) specify the measures that the applicant intends to take to avoid, remedy, or mitigate the adverse effects identified; and
- (i) include any further information required by regulations.

An environmental impact assessment must contain the above information in:

- (a) such detail as corresponds to the scale and significance of the effects that the activity may have on the environment and existing interests; and
- (b) sufficient detail to enable the Environmental Protection Authority and persons representing affected existing interests to understand the nature of the activity and its effects on the environment and existing interests.

The word **effect** includes:

- (a) any positive or adverse effect; and
- (b) any temporary or permanent effect; and
- (c) any past, present, or future effect; and
- (d) any cumulative effect that arises over time or in combination with other effects; and
- (e) any potential effect of high probability; and
- (f) any potential effect of low probability that has a high potential impact.

Clauses (a) to (d) apply regardless of the scale, intensity, duration, or frequency of the effect.