

Montara Well Head Platform Uncontrolled Hydrocarbon Release

Submission to Commission of Inquiry

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Scope of Submission

It is the intention of this submission to address the terms of reference of the Commission from an academic viewpoint. In particular, this submission will contain information and recommendations pertaining to regulation of petroleum safety and the regulation of oil spills in the offshore petroleum environment. It will not address the environmental issues or impacts.

The information within this submission comprises some comparative reference to the offshore petroleum safety, oil spill response and contingency planning in other jurisdictions. This is utilised where it is likely that the experiences of other jurisdictions can provide significant learning experiences for Australian regulators of oil spills.

About the Author

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Terms of Reference

A. Circumstances and likely causes

TR1. Investigate and identify the circumstances and likely cause(s) of the Uncontrolled Release.

As an academic, I do not have the relevant adequate knowledge to determine the likely cause of the Uncontrolled Hydrocarbon Release (UHR). However, the submission provided by PTTEP to the Montara Commission of Inquiry (MCI) identified the cause of the UHR as a failure to install a 320mm Pressure Containment Cap (PCC) on the H1 Well.¹ A 244mm PCC had been installed on the H1 Well, however a change order had requested a 320mm PCC to be installed on the H1 Well.²

The absence of the 320mm PCC was discovered by PTTEP when work on the well commenced in August 2009.³ PTTEP was advised in March 2009 by the drilling supervisor on the *West Atlas* drill rig that the PCC had been installed, however this was discovered by PTTEP to not be the case when work on the Well recommenced in August 2009.⁴ In addition, the well was not inspected by the National Offshore Petroleum Safety authority (NOPSA), with NOPSA noting that the Designated Authority (DA) has responsibility for well operations under the *Petroleum (Submerged Lands) (Management of Well Operations) Regulations 2004*.⁵ Furthermore, NOPSA noted that it does not undertake any on-site activities other than inspection and investigatory actions under powers afforded to it by the OHS laws of the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth) (OPAGGSA).

This scenario of events raises three questions:

1. Why did the Atlas drill supervisor advise that a 320mm PCC was in place when in fact only a 242mm PCC was in place?
2. Why did PTTEP continue drilling operations when there was knowledge that there was no PCC in place?

¹ PTTEPAA, *PTTEPAA: Submission to Commission of Inquiry, Montara Well Head Platform Uncontrolled Hydrocarbon Release TR1 (Submission No SUBM.1000.0001.0041)* (2010), [92]. This is corroborated by Atlas Drilling Pty Ltd, *Commission of Inquiry, Montara Well Head Platform Uncontrolled Hydrocarbon Release: Outline of Written Submission by Atlas Drilling (s) Pte Ltd (Submission no. SUBM.1505.001.001)* 2010), [13].

² PTTEPAA, *PTTEPAA: Submission to Commission of Inquiry, Montara Well Head Platform Uncontrolled Hydrocarbon Release TR1 (Submission No SUBM.1000.0001.0041)* (2010), [98]. This is corroborated by Atlas Drilling Pty Ltd, *Commission of Inquiry, Montara Well Head Platform Uncontrolled Hydrocarbon Release: Outline of Written Submission by Atlas Drilling (s) Pte Ltd (Submission no. SUBM.1505.001.001)* 2010), [11].

³ PTTEPAA, *PTTEPAA: Submission to Commission of Inquiry, Montara Well Head Platform Uncontrolled Hydrocarbon Release TR1 (Submission No SUBM.1000.0001.0041)* (2010), [92].

⁴ PTTEPAA, *PTTEPAA: Submission to Commission of Inquiry, Montara Well Head Platform Uncontrolled Hydrocarbon Release TR1 (Submission No SUBM.1000.0001.0041)* (2010), [100].

⁵ As noted by NOPSA in NOPSA, *Commission of Inquiry: Montara Well Head Platform Uncontrolled Hydrocarbon Release (Submission No SUBM.3003.0001.0001)* (2010), 8.

3. Why did NOPSA not inspect the well, and why does NOPSA not manage well operations?
(see TR 2 below for a discussion on the role of NOPSA in drill operations)

The first two questions are for the MCI to consider and investigate. I shall make some comments regarding question 3 in TR 2 below.

TR2. Review the adequacy and effectiveness of the regulatory regime.

Regulation of offshore petroleum in Australia.

The regulatory regime for offshore petroleum activities is complex.

Initial arrangements between the Commonwealth and states for the exploration and production of offshore petroleum were created under the 1967 Petroleum Agreement.⁶ This agreement was forged between the Commonwealth, states and affected territories and is officially known as the Agreement Relating to the Exploration for and the Exploitation of, the Petroleum Resources, and Certain Other Resources, of the Continental Shelf of Australia and of Certain Territories of the Commonwealth and of Certain Other Submerged Land signed October 16, 1967 (Petroleum Agreement). The Agreement did not intend to create legal relationships enforceable in a court of law.⁷ Rather, it noted that petroleum activities would be encouraged by uniform legislative measures on the continental shelf beyond territorial limits, and that the state and national government would cooperate to ensure effectiveness of authorities over petroleum resources.⁸

The legal status of the Petroleum Agreement enunciated in clause 26 of the Agreement –

‘the Governments acknowledge that this Agreement is not intended to create legal relationships justiciable in a Court of Law but declare that the Agreement shall be construed and given effect to by the parties in all respects according to the true meaning and spirit thereof’⁹

To achieve constitutional legitimacy, each state and territory government legislated with respect to offshore petroleum operations in identical terms to the Commonwealth petroleum legislation (known as ‘mirror’ legislation).¹⁰ In addition, all governments agreed not to make, amend or repeal regulations under the legislation except under a prior agreement to do so.¹¹

⁶ Constance D Hunt, *The Offshore Petroleum Regimes of Canada and Australia* (1989), 63.

⁷ Constance D Hunt, *The Offshore Petroleum Regimes of Canada and Australia* (1989), 64.

⁸ Constance D Hunt, *The Offshore Petroleum Regimes of Canada and Australia* (1989), 63.

⁹ See Michael Crommelin, ‘The Legal Character of Petroleum Production Licences in Australia’ in Terrence Daintith, *The Legal Character of Petroleum Licences: A Comparative Study* (1981), 61.

¹⁰ Michael Crommelin, ‘The Legal Character of Petroleum Production Licences in Australia’ in Terrence Daintith, *The Legal Character of Petroleum Licences: A Comparative Study* (1981), 62, and *Bonser v La Macchia* (1969) 122 CLR 177.

¹¹ Michael Crommelin, ‘The Legal Character of Petroleum Production Licences in Australia’ in Terrence Daintith, *The Legal Character of Petroleum Licences: A Comparative Study* (1981), 62.

The Petroleum (Submerged Lands) Act 1967 (CTH) (PSLA) was conceived as an ingenious legal mechanism to give effect to the Petroleum Agreement,¹² securing offshore petroleum development without having to resolve the jurisdictional issues between the Commonwealth and the states.¹³ This legislation arose because of the constitutional conflict that existed between the Commonwealth and states at the time the PSLA was enacted. This PSLA addressed this conflict by enacting a comprehensive legislative ‘code,’ creating joint Commonwealth-state administration of petroleum of titles.¹⁴ Much of the details ordinarily contained in regulations are contained in the PSLA, since if administrative delegation occurred there was a risk of variation or conflict between the Commonwealth and states.¹⁵ To reduce the capacity for states to go their own way, the provisions of the petroleum legislation were necessarily detailed,¹⁶ granting each state or territory the legislative capacity to grant dual titles to oil companies under State Authority and Delegated Authority from the Commonwealth.¹⁷ Consequently, there are eight petroleum jurisdictions in Australia.¹⁸

The relationship between the states and Commonwealth altered in 1973 when the Commonwealth claimed the offshore maritime zones in the Sea and Submerged Lands Act 1973 (Cth). The NSW government immediately challenged the constitutional validity of this legislation in the High Court.¹⁹ NSW contended that they held rights in the territorial waters from the baseline seaward three nautical miles, the same as those rights for fishing held in *Bonser v La Macchia*.²⁰ The High Court in *NSW v Commonwealth*²¹ held that sovereign rights in relation to the Continental Shelf outside the territorial waters vested in the Commonwealth. Furthermore, with the exception of Gibbs and Stephen JJ in dissent, the justices also concurred that the sovereignty in the territorial waters was vested in the Commonwealth.²² Consequently, the states were denied property rights in the seabed and subsea terrain of the territorial

¹² Constance D Hunt, *The Offshore Petroleum Regimes of Canada and Australia* (1989), 64.

¹³ Terrence Daintith, *Discretion in the Administration of Offshore Oil and Gas* (2005), 13.

¹⁴ Terrence Daintith, ‘A Critical Evaluation of the Petroleum (Submerged Lands) Act as a Regulatory Regime’ (2000) *AMPLA Yearbook* 2000 91, 93. This joint management required the establishment of two Authorities that regulate petroleum activities: The Joint Authority, which comprises the relevant Commonwealth Minister and the responsible State Minister, and the Designated Authority, comprising the responsible state or territory Minister.

¹⁵ Terrence Daintith, *Discretion in the Administration of Offshore Oil and Gas* (2005), 13.

¹⁶ Terrence Daintith, *Discretion in the Administration of Offshore Oil and Gas* (2005), 13.

¹⁷ Terrence Daintith, *Discretion in the Administration of Offshore Oil and Gas* (2005), 13.

¹⁸ Commonwealth Offshore, New South Wales (NSW), Western Australia (WA), Tasmania, Victoria, Northern Territory (NT), South Australia (SA) and Queensland (Qld).

¹⁹ *NSW v Commonwealth* (1975) 8 ALR 1.

²⁰ *Bonser v La Macchia* (1969) 122 CLR 177.

²¹ *NSW v Commonwealth* (1975) 8 ALR 1.

²² *NSW v Commonwealth* (1975) 8 ALR 1.

waters, since their territory ended at low-water mark.²³ This decision had a major impact on the states' jurisdiction over, and income from the offshore petroleum, and prompted negotiations between petroleum-producing states and territories and the Commonwealth.

A permanent solution to these constitutional issues was reached in the Offshore Constitutional Settlement in 1980 and enacted at state and Commonwealth level through mirror legislation (Commonwealth and state Petroleum (Submerged Lands) Acts).²⁴ In addition, a plethora of other required legislation was enacted to enable the implementation of the Offshore Constitutional Settlement.²⁵ The offshore jurisdiction of the states/territories is defined in section 5 of the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth) (OPAGGSA) as agreed to by the states and Commonwealth in the Offshore Constitutional Agreement, which remain in force today:

1. Commonwealth offshore petroleum legislation is limited to the area outside the coastal waters of the States and the Northern Territory;²⁶ and
2. For this purpose, the outer limits of the State and Northern Territory coastal waters should start 3nm from the baseline of the territorial sea;²⁷ and
3. The States and the Northern Territory should share, in the manner provided by the OPA, in the administration of the Commonwealth offshore petroleum legislation;²⁸ and
4. State and Northern Territory offshore petroleum legislation should apply to State and Northern Territory coastal waters;²⁹ and
5. The Commonwealth, States and the Northern Territory should try to maintain, as far as practicable, common principles, rules and practices in regulating and controlling the exploration for, and exploitation of offshore petroleum beyond the baseline of Australia's territorial seas.³⁰

As a result of this legislative framework, the States legislate for and regulate petroleum activities in Coastal Waters (baseline to 3 nautical miles), while petroleum activities in Commonwealth Waters are regulated under the OPAGGSA and associated *Offshore Petroleum and Greenhouse Gas Storage Regulations 1985* (Cth) (OPAGGSR). The OPAGGSA and OPAGGSR

²³ Pat Brazil, *Offshore Constitutional Settlement 1980: A Case Study in Federalism* (2001) Centre for International and Public Law, Faculty of Law, Australian National University, 2.

²⁴ *Petroleum (Submerged Lands) Act 1967* (Cth), *Petroleum (Submerged Lands) Registration Fees Act 1990* (WA), *Petroleum (Submerged Lands) Act 1982* (Vic), *Petroleum (Submerged Lands) Act 1982* (Qld), *Petroleum (Submerged Lands) Act 1982* (SA), *Petroleum (Submerged Lands) Act 1982* (Tas), *Petroleum (Submerged Lands) Act 1982* (NSW), and *Petroleum (Submerged Lands) Taxation Act 1967* (NSW), as outlined in Michael Crommelin, 'The Legal Character of Petroleum Production Licences in Australia' in Terrence Daintith, *The Legal Character of Petroleum Licences: A Comparative Study* (1981), 62.

²⁵ Required Acts include *Coastal Waters (State Powers) Act 1980*; *Coastal Waters (Northern Territory Powers) Act 1980*; *Coastal Waters (State Title) Act 1980*; *Coastal Waters (Northern Territory Title) Act*; and *Offshore Minerals Act 1984* (Cth).

²⁶ *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth), s5(2)a

²⁷ *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth), s5(2)b

²⁸ *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth), s5(2)c

²⁹ *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth), s5(2)d

³⁰ *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth), s5(2)e.

are supported by a framework of guidelines for the management of offshore operations. This creates an intricate web of regulatory framework that has previously identified as one which creates unnecessary regulatory burden that causes increased regulatory costs and unnecessary delays.

Many submissions to the MCI have highlighted the regulations pertaining to Well Operation Management Plans (WOMP), therefore there is no requirement to repeat such information. However, I wish to call to the attention of the MCI the currency Well Guidelines.³¹ These guidelines have not been updated since December 2004, preceding both NOPSA and the OPAGGSA. As such, there is a concern regarding the accuracy of information contained in the guidelines, which have as an objective to facilitate the understanding of the requirement for operators to prepare a Well Operations Management Plan (WOMP) for their activities throughout the lifecycle of a well.³² In addition, a number of clauses pertaining to well management have been revoked upon agreement by State and Commonwealth governments, although the Schedule of Specific Requirements as to Offshore Petroleum and Exploration Production has not been updated to reflect such changes since a number of States are yet to make the necessary changes.³³ As such, this schedule is also out of date.

Recommendation:

All Guidelines should be updated by the Department of Resources, Energy and Tourism to reflect current legislation.

All States should update their schedules as required to ensure that the Commonwealth Schedule of Specific Requirements as to Offshore Petroleum and Exploration Production can be updated to accurately reflect the current requirements to ensure clarity for all operators.

³¹ Known as Resources Division, Department of Industry, Tourism and Resources, *Guidelines for Offshore Well Operations* (2004)

http://www.ret.gov.au/resources/upstream_petroleum/offshore_petroleum_regulation_and_legislation/offshore_petroleum_legislation_regulation_and_guidelines/Pages/OffshorePetroleumLegislationRegulationandGuidelines.aspx at 12 March 2010.

³² Resources Division, Department of Industry, Tourism and Resources, *Guidelines for Offshore Well Operations* (2004)

http://www.ret.gov.au/resources/upstream_petroleum/offshore_petroleum_regulation_and_legislation/offshore_petroleum_legislation_regulation_and_guidelines/Pages/OffshorePetroleumLegislationRegulationandGuidelines.aspx at 12 March 2010, 2.

³³ Department of Resources, Energy and Tourism, *Offshore Petroleum, Legislation and Guidelines* (2009)

http://www.ret.gov.au/resources/upstream_petroleum/offshore_petroleum_regulation_and_legislation/offshore_petroleum_legislation_regulation_and_guidelines/Pages/OffshorePetroleumLegislationRegulationandGuidelines.aspx at 26 March 2010.

The role of NOPSA in the management of HSE in Australian offshore petroleum activities

The stated role of the National Offshore Petroleum Safety Authority (NOPSA) is to administer offshore petroleum safety legislation.³⁴ The organisation's primary objectives include:

1. Improving health and safety outcomes across the offshore petroleum industry
2. Ensuring health and safety regulation of the offshore petroleum industry is provided to standards that are equal to the best in the world
3. Reducing the regulatory burden on the offshore petroleum industry, which operates across multiple jurisdictions, by delivering a consistent and comprehensive health and safety regime.

However, in their submission, NOPSA stated that it is not their responsibility to undertake any onsite activities other than the inspection and investigatory actions under powers afforded to it by listed OHS laws of OPAGGSA.³⁵ Furthermore, NOPSA noted in its submission that it is the responsibility of the Designated Authority (DA) to regulate well operations and the integrity of the Wells.³⁶ NOPSA absolved itself of any responsibility in the Montara UHR on the basis that it has no role under the Management of Well regulations. However, the issue of NOPSA's role in the UHR should be subject to more scrutiny since NOPSA was responsible for the safety of the Montara well both below and above the Blow-Out Preventer (BOP) as per MOSAF and Well Operation Management Plan (WOMP) regulations, since people were present at the rig when this incident happened. NOPSA is also responsible for the integrity of the facilities above the BOP. Furthermore, the tenet of NOPSA's submission is that they are best placed to administer integrity matters.

NOPSA appears to suggest that the entire incident arose from the failure of well integrity which is the domain of the NT DA. While the integrity of the well was one of the root causes, it is also apparent that a series of operational errors of judgment occurred which were contributory factors and which led to exacerbation of the physical and environmental damage. It should be understood that integrity failures leading to well control incidents can and do occur, generally when platforms are manned, and are therefore safety case matters which are administered by NOPSA.

NOPSA's attempt to suggest that the NT DA is wholly responsible for the errors of judgment at Montara (and by inference all DA's are remiss in this regard) is a selective interpretation of the facts. NOPSA appears to state that the planning of day to day drilling operations (well re-entry for example) is not part of its responsibility but are the sole responsibility of the DA. This view

³⁴ NOPSA, *Welcome to NOPSA!* (2010) <http://www.nopsa.gov.au/> at 12 March 2010.

³⁵ NOPSA in NOPSA, *Commission of Inquiry: Montara Well Head Platform Uncontrolled Hydrocarbon Release (Submission No SUBM.3003.0001.0001)* (2010), 9.

³⁶ NOPSA in NOPSA, *Commission of Inquiry: Montara Well Head Platform Uncontrolled Hydrocarbon Release (Submission No SUBM.3003.0001.0001)* (2010), 9.

demonstrates the narrow view NOPSAs has of its role as an OHS regulator (see also the Varanus Island inquiry).

Regardless of the DA involvement, NOPSA should not abrogate its responsibility. NOPSA is not without fault in the Montrata UHR for the following reasons:-

- The well failure and UHR occurred during the re-entry of the Montara wells using a rig subject to a safety case defining its operational procedures;
- The Drilling Company (Atlas) and PTTEP were both aware of the condition of the well at the time of the event but continued with their operations –a safety management system oversight;
- Drilling operations risk assessment is part of the safety case activities, and therefore the jurisdiction of NOPSA.
- The activities in the re-entry works as described by PTTEP in their submission were drilling operations matters including safety matters which fall under the auspices of NOPSA;
- The DA is not responsible for the OHS aspects of day to day rig operations and decision making; and
- NOPSA was the regulator of safety of the drilling activities at the time of the event.

The safety case regime is one that relies on a high level of management sophistication on the part of the organizations involved. However, it appears that NOPSA chooses not to engage with the operators, and therefore was not aware of the day-to-day operations. These details are available in the daily drilling reports and daily geological reports that are available for NOPSA to obtain and review. If NOPSA kept in touch with day-to-day operations, and engaged to a greater extent with PTTEP and Atlas Drilling, it is possible that they would have been able to intervene in drilling operations given the failure to install the 320mm PCC.

It would appear that the public perception is that high-risk petroleum operations are regulated by direct ‘hands-on’ scrutiny. In practice, the NOPSA model involves bi-annual regulatory inspection/audit in high-risk operations and no involvement in or scrutiny of, the day-to-day operations. The reality of offshore safety at present is a hands-off approach. NOPSA does not involve itself in the day-to-day operations due to its concerns (derived from its UK Health Safety and Environment (HSE) roots) that there is a high probability of “regulatory capture”. The Varanus and Montara incidents appear to demonstrate the failure of this hands-off approach.

For the effective regulation of well and platform safety, and resource management there should be continuous scrutiny and review of operations. It is anticipated that the outcomes of the Varanus accident and MCI will address these deficits.

Role of Petroleum Safety Authority in Norway

The management of petroleum safety in the Norwegian jurisdiction is an integrated approach. Unlike the Australian regulatory framework, there is no division of responsibilities, where the jurisdiction of the safety regulator ends at OHS. Rather, the regulatory framework for Norwegian petroleum safety is broad. The Petroleum Safety Agency (PSA) is the regulatory authority for technical and operational safety, including emergency preparedness, and OHS within the working environment. This regulatory role covers all phases of petroleum activities, from planning and design, to construction and removal of platforms.³⁷ Under the Norwegian regulatory framework for HSE, safety is broadly applied across three categories:

- human life, health and welfare;
- the natural environment;
- financial investment and operational integrity.

A competent regulatory framework comprising the framework regulations and supplementary regulations underpins this broad framework.³⁸

Regulations relating to Health, Safety and the Environment in the Petroleum Activities (the framework regulations)

The Framework Regulations provide a framework for coherent and prudent petroleum activities and contain provisions on, inter alia, the scope, obligated party (responsibility), principles relating to risk reduction, application of maritime legislation as an alternative to technical marine requirements in the regulations, principles relating to health, safety and the environment.

There are four supplementary regulations:

- Regulations relating to Management in the Petroleum Activities (the management regulations).
 - The Management Regulations assemble all overarching requirements to management in the field of health, safety and the environment. They contain requirements to, inter alia, risk reduction, management elements, resources and processes, analyses and measuring, follow-up and improvement.
- Regulations relating to Material and Information in the Petroleum Activities (the information duty regulations).

³⁷ Petroleum Safety Authority, *About Us* (2010) <http://www.ptil.no/about-us/category89.html> at 12 March 2010.

³⁸ See Petroleum Safety Authority, *The Continental Shelf* (2010) <http://www.ptil.no/regulations/the-continental-shelf-article4246-87.html> at 1 March 2010.

- The Information Duty Regulations set requirements to material and information to be submitted or made available to the authorities. The regulations provide for electronic administrative procedures. They contain requirements to, inter alia, applications for consent, alerts, notification and reporting.
- Regulations relating to the Design and Outfitting of Facilities etc. in the Petroleum Activities (the facilities regulations).
 - The Facilities Regulations regulate the design and outfitting of facilities, such as safety functions and loads, materials, work areas and accommodation areas, physical barriers and emergency preparedness.
- Regulations relating to Conduct of Activities in the Petroleum Activities (the activities regulations).
 - The Activities Regulations regulate the conduct of various activities and set requirements to, inter alia, planning, prerequisites for use, the working environment, work arrangements, health-related aspects, the external environment, maintenance and emergency preparedness. Requirements to environmental monitoring are listed in an appendix, which forms part of the regulations.

This integrated approach should be considered by Australia as a method of regulating the safety of offshore petroleum. In particular, Australia needs to consider its definition and applicability of safety – safety of workers, or should it extend to safety of the environment. The Norwegian regulatory framework was considered when the NOPSA framework was established, with two Norwegian petroleum safety regulators (Odd Bjerre Finnestad and Magne Ognedal) contributing to the final report.

The reassessment of Australia's offshore petroleum safety regulation is an issue that is under intense scrutiny at present. The purpose of this submission is to highlight the broad nature of the Norwegian petroleum regulatory framework and to highlight the broad interpretation of 'safety', and its environmental and economic applicability.

Recommendation:

The role of NOPSA in Australia should be increased to include at a minimum, well integrity. In addition, RET should consider incorporating safety of the environment, and therefore regulation of environment into a safety regulator, to ensure due regard and regulatory coverage of the environment.

B. Adequacy of Response

TR5. Assess the adequacy of the response to the Uncontrolled Release by the current titleholder and the West Atlas drilling rig.

Titleholder response to the initial UHR

According to the submission by PTTEP to the MCI, the first hydrocarbon release (containing approximately 40-60 bbl) occurred at 0530 on 21 August 2010.³⁹ This release subsided, although bubbles were seen and heard from the top of the Conductor.⁴⁰ This was followed by a UHR at 0723, of higher pressure and volume than the initial UHR, containing a mix of unignited oil and gas.⁴¹ Soon after, the rig was abandoned since safety was compromised due to the presence of unignited hydrocarbons.⁴² Soon after the second UHR at 7.23, PTTEP reported the UHR to AMSA, and control over the UHR was transferred to AMSA,⁴³ in accordance with the provisions of NATPLAN,⁴⁴ and the *National Marine Oil Spill Contingency Plan* (NMOSCP).⁴⁵ Prior to transfer of responsibility to AMSA, PTTEP, as the relevant oil company, was the designated Combat Agency responsible for oil spills at its oil exploration rig.⁴⁶

Containment

According to the submission of PTTEP to the MCI, PTTEP did not deploy any response to either the first or second UHR. This means that no booms were deployed in an attempt to contain the UHR within the vicinity of the source of the pollution. As Combat Agency, PTTEP has the responsibility to undertake, as soon as possible, preventative and cleanup action for a UHR.⁴⁷ Even given the risk of the unignited hydrocarbons after the second UHR, there should have been some attempts by PTTEP to manage the spill. Such response could have included the placement of booms around the spill at a safe distance in order to reduce the risk of ignition of the unignited hydrocarbon, containing the spill as close as possible to the source of the spill. Instead, PTTEP did not instigate any such measures. Furthermore, there is no mention by PTTEP in its submission, whether it even has immediate access to spill control measures, particularly booms.

³⁹ PTTEPAA, *PTTEPAA: Submission to Commission of Inquiry, Montara Well Head Platform Uncontrolled Hydrocarbon Release TR1 (Submission No SUBM.1000.0001.0041)* (2010), [81].

⁴⁰ PTTEPAA, *PTTEPAA: Submission to Commission of Inquiry, Montara Well Head Platform Uncontrolled Hydrocarbon Release TR1 (Submission No SUBM.1000.0001.0041)* (2010), [81].

⁴¹ PTTEPAA, *PTTEPAA: Submission to Commission of Inquiry, Montara Well Head Platform Uncontrolled Hydrocarbon Release TR1 (Submission No SUBM.1000.0001.0041)* (2010), [84].

⁴² PTTEPAA, *PTTEPAA: Submission to Commission of Inquiry, Montara Well Head Platform Uncontrolled Hydrocarbon Release TR1 (Submission No SUBM.1000.0001.0041)* (2010), [84].

⁴³ PTTEPAA, *PTTEPAA: Submission to Commission of Inquiry, Montara Well Head Platform Uncontrolled Hydrocarbon Release TR5 (Submission No SUBM.1000.0001.0041)* (2010), [1].

⁴⁴ Australian Maritime Safety Authority, *National Plan: Australia's National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances* (NATPLAN) (2007), 5.

⁴⁵ Australian Maritime Safety Authority, *National Marine Oil Spill Contingency Plan* (2005), 2.4.

⁴⁶ this is in accordance with both NATPLAN and NMOSCP.

⁴⁷ Australian Maritime Safety Authority, *National Marine Oil Spill Contingency Plan* (2005), 2.5.

The indication from the lack of initial response by PTTEP is that there appeared to be no contingency plan for an oil spill from an oil platform. When the initial small UHR occurred, PTTEP did not attempt to in any manner contain or address the spill. Certainly PTTEP engaged in cleanup operations for the major UHR, including spraying dispersant alongside AMSA aircraft. However, what is of concern is the apparent lack of localised containment preparedness using booms to prevent the oil from moving from the source, and aid in the recovery of the oil.

When the second, larger and sustained UHR occurred, PTTEP contacted and handed over operations to AMSA. This gives the indication that PTTEP, was not prepared for an oil spill, even though it is the Combat Agency. When a small spill occurred, there was no response, and once a larger spill occurred, AMSA was contacted, and control handed over to AMSA. Certainly, PTTEP is willing to accept liability for the costs of the cleanup of the spill. However it did not appear to have the capacity to respond to the spill when it occurred, and 'as soon as possible', as required by the NMOSCP.⁴⁸

This lack of response of PTTEP not only contravenes the requirement as the Combat Agency according to NATPLAN,⁴⁹ it also is counterintuitive to the principles of oil spill response in some offshore jurisdictions. In Norway, the response to UHR is premised on the idea that the one doing the activity is responsible for their actions. When a UHR occurs on the Norwegian Continental Shelf, the operator is required to report the incident immediately to the Petroleum Safety Authority (PSA) and the Norwegian National Coastal Authority (Kystverket). Furthermore, all large operators must be able to handle an uncontrolled blowout of 60,000 bbl/day in 3metre seas and a 1.5 knot currents. The operating company is required to have immediate access to boom and skimmers with the capacity to contain and pick up 600 bbl/hour within 2 hours of an UHR, while other responding agencies are enroute with equipment from onshore.⁵⁰

Reporting

Under the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* (Cth), oil companies have a requirement to report UHR incidents to the relevant authority, to ensure the capacity for continual monitoring and environmental assessment. PTTEP delayed in reporting the initial UHR. The initial UHR that occurred at 5.30am was not reported to either AMSA or the NT Department of Resources - Minerals and Energy, who was the Designated Authority under s70-71 of the OPAGGSA (the NTDA). Furthermore, when the second UHR occurred, the spill was reported to AMSA (since PTTEP requested that AMSA take control over

⁴⁸ Australian Maritime Safety Authority, *National Marine Oil Spill Contingency Plan* (2005), 2.5.

⁴⁹ Australian Maritime Safety Authority, *National Marine Oil Spill Contingency Plan* (2005), 2.5.

⁵⁰ Daniel J Lawn, *An Interim Review of Oil Spill Prevention and Cleanup Capabilities in Northern Europe Compared to Alaska* (1990), 6-7.

the spill),⁵¹ however there is no indication in PTTEP's submission that PTTEP reported it to the NTDA. This failure of communication can slow response and prevent containment of a spill. The fact that it was a minor spill is irrelevant. There should be protocols that force companies to report any UHR to the all agencies that have jurisdiction, including AMSA, the relevant DA, and RET.

Recommendation:

The response of PTTEP to the UHR should be assessed. In particular, reporting times and availability of equipment to respond to a marine oil spill.

NATPLAN should require that oil companies., as the Combat Agency, has adequate resources to be able to respond immediately to an UHR.

Capping of well

PTTEP contacted *ALERT well control* (ALERT) in the aftermath of the UHR, seeking expert advice on options to control the UHR. Whilst the ALERT team rapidly responded, (within 24 hours), it was to be another 105 days before the UHR was stopped, and the H1 Well was capped. PTTEP attempted to employ the use of deluge (wetting down to reduce the risk of fire) and simultaneous well control activities (surface capping and relief well operations). However, NOPSA issued a prohibition notice which prohibited any work being done that required any personnel to be at any workplace at the WHP facility, including in other support vessels offshore to the WHP.⁵² The effect of this prohibition notice was that PTTEP was no longer able to continue deluge operations. Furthermore, PTTEP concluded that NOPSA took the view that it placed safety of personnel above the environment and property damage considerations, and therefore it was unlikely that NOPSA would approve ANY operations that would require personnel to be near the WHP or *West Atlas* drilling rig. This perception by PTTEP affected their response to the UHR and operations attempting to cap the leaking well.⁵³ This failure to attempt well capping operations based on interpretation of what NOPSA would say significantly delayed the capping of the leaking well, unnecessarily contributing thousands of barrels of leaked hydrocarbons into the marine environment.

⁵¹ according to the submission by PTTEP to the MCI: see PTTEPAA, *PTTEPAA: Submission to Commission of Inquiry, Montara Well Head Platform Uncontrolled Hydrocarbon Release TR5 (Submission No SUBM.1000.0001.0041)* (2010).

⁵² PTTEPAA, *PTTEPAA: Submission to Commission of Inquiry, Montara Well Head Platform Uncontrolled Hydrocarbon Release TR5 (Submission No SUBM.1000.0001.0041)* (2010), [5]

⁵³ PTTEP noted in its submission to the MCI that it came up with a number of possible responses to the leaking well, however it did not implement them since it was likely that NOPSA would reject them based on the ALARP standard from NOPSA. See PTTEPAA, *PTTEPAA: Submission to Commission of Inquiry, Montara Well Head Platform Uncontrolled Hydrocarbon Release TR5 (Submission No SUBM.1000.0001.0041)* (2010),[20].

TR6. Assess the adequacy of regulatory obligations applicable to the titleholder and the West Atlas drilling rig in relation to the response to the incident, and make any recommendations necessary to improve the regulatory obligations that may be applicable to any future incidents.

The response to an UHR is two pronged: attempts to contain and clean up the oil spill, and to cap the leaking well as soon as possible.

Capping

The greatest failure in the response to the Montara oil spill was the inability and/or unwillingness of any government, authority or agency to assist in the capping of the leaking well soon as possible. PTTEP made significant attempts to cap the well from the outset, as demonstrated by mobilising ALERT, and preparing for capping through deluging and other preparatory activities. However, the prohibition notice issued by NOPSA effectively prevented such a response.

The response of NOPSA to the leaking well was to put place prohibition notice on the WHP, as a result of the safety case regime, and prevent all stakeholders from entering the WHP. This conservative approach prevented PTTEP and ALERT from attempting well capping operations. However NOPSA, in its submission to the MCI, made it very clear that it is not an 'emergency response organisation, not does it direct response or recovery operations, nor does it undertake any onsite activities other than inspection and investigatory activities, under applicable OHS laws.⁵⁴ The sum result was that NOPSA placed a legal ban on any body entering the area to cap the leaking well, then assumed its legal position as regulator of OHS only, refusing to respond to the challenges of apping a leaking well. Whilst NOPSA's course of action, as regulator of offshore petroleum safety, was legally correct, it is questionable whether NOPSA's actions were within the spirit of its mandate as offshore safety regulator, since NOPSA as a safety regulator failed to embrace its intent of ensure the integrity of the facilities.⁵⁵

An important question is raised by the NOPSA's response to the UHR. Was the NOPSA prohibition notice that was issued and maintained by NOPSA, forcing the capping of the well to occur through a relief well drilled 2km from the source of the leak, industry best practice response to such an event? Certainly NOPSA was correct in issuing an initial prohibition notice so that a proper safety assessment could be made, and lives were not placed at risk. However, when deciding to maintain the prohibition order, did NOPSA seek or have due regard to any advice provided to them from either internal or external stakeholders, including RET, the NT DA, the NOPSA Board, PTTEP, and/or other companies? Furthermore, did NOPSA consult with

⁵⁴ NOPSA in NOPSA, *Commission of Inquiry: Montara Well Head Platform Uncontrolled Hydrocarbon Release (Submission No SUBM.3003.0001.0001)* (2010), 9.

⁵⁵ NOPSA, *Facility Integrity* (2009) <http://www.nopsa.gov.au/presentation/Presentation%20-%20Facility%20Integrity%20-%20Accidents%20and%20Dangerous%20Occurrences.pdf> at 12 March 2010.

appropriate Ministers, national and international oil companies, international regulators, and well management experts when deciding that the prohibition notice should remain.

The history of petroleum activities, both on and offshore, is littered with examples of UHR, and the need for dangerous responses to those UHR's. Offshore, a huge UHR occurred on the Ekofisk Bravo platform in 1977. It occurred when the production valve stack had been removed, and the BOP had not yet been installed. The well then kicked and an incorrectly installed downhole safety valve failed. This resulted in the well blowing out with an uncontrolled release of oil and gas.⁵⁶ The personnel were evacuated without injury via lifeboats and were picked up by a supply vessel. The initial flow was estimated at 28,000 bpd with a calculated total release of 202,380 bbls, with a total spill estimate between 80,000 bbls and 126,000 bbls. The well was capped after only seven days on 30 April 1977.⁵⁷ It is apparent that it is not a technical deficiency which prevented the capping of the Montara Well, since it was possible forty years ago to contain a high pressure UHR in the North Sea, facing similar concerns of unignited hydrocarbons. In this instance it would appear that the limitations of the Australian offshore petroleum regulatory framework hampered the timely capping of a leaking well.

Recommendation:

The capping of the Well should be the subject of intense scrutiny, particularly the role of NOPSA in limiting the options of PTTEP to control the course of the UHR. Furthermore, the scope of responsibilities and response of NOPSA should be investigated.

The lack of response from other government agencies (both State and federal), in assisting in capping the well should be investigated. Furthermore, the role of government agencies and industry in rendering assistance during UHR should be considered.

Oil spill response

Current regulatory arrangements pertaining to oil spills in Australia

The current regulatory structure for offshore oil spills is outlined in the NATPLAN,⁵⁸ with the responsibilities of the NATPLAN participants clearly defined in the NATPLAN Intergovernmental

⁵⁶ Ekofisk Bravo Platform Blowout (2009) <http://dtiinfo1.dti.gov.uk/energy/coal/cfft/co2capture/appendix2.pdf> at 13 March 2010.

⁵⁷ Ekofisk Bravo Platform Blowout (2009) <http://dtiinfo1.dti.gov.uk/energy/coal/cfft/co2capture/appendix2.pdf> at 13 March 2010.

⁵⁸ Australian Maritime Safety Authority, *National Plan: Australia's National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances* (NATPLAN) (2007), 5.4.

Agreement (NIGA). The NATPLAN provides a national framework for responding promptly and efficiently to marine pollution incidents by designating competent national and local authorities to respond to spills. The Statutory agency is generally the State/NT or Commonwealth Agency having statutory authority for marine pollution in their jurisdiction. This system of response relies upon a system of delegations to State agencies.

In this instance, although the incident occurred in Commonwealth Waters, the relevant Statutory Authority was the NT Department of Resources – Mineral and Petroleum as the authority was delegated to it as Designated Authority under s70-72 of the OPAGGSA. It would appear that the NT did not respond to the UHR, since PTTEP handed over control of the spill to AMSA. However, it is important to address the capacity of the NTDA, as Commonwealth delegate, to respond to an oil spill from a petroleum platform. The Commonwealth had delegated to the NTDA responsibility for managing offshore oil spills. However, the question is whether the Commonwealth conducted an assessment of the capacity and preparedness of the NTDA to respond to an offshore oil spill from a petroleum platform.

Recommendation:

The Commonwealth, as Delegating Authority, should assess the capacity of the Northern Territory Department of Resources – Minerals and Petroleum, as Designated Authority, to implement appropriate oil spill control measures within its jurisdictions.

Preparedness and training

It is apparent that both the NATPLAN and the NMOSCP have presumed that the primary source of offshore oil pollution is likely to be ship-sourced pollution or arising from oil terminal/port facilities. This is evident by the Australian Transport Council being the Ministerial body responsible for NATPLAN matters, and the focus of training operations in the last ten years. This presumption is valid, given that all oil spills in Australia's maritime zone has been the result of ship-sourced oil pollution (either from oil tankers or cargo ships), or from oil refinery incidents (eg the Mobil refinery incident at Port Stanvac in 1999).⁵⁹ The Montara Wellhead spill differs from these typical maritime spill events. Instead, this spill occurred in a remote area of Australia (the North-western coastline), far offshore, and was sourced from petroleum activities rather than shipping. This created many challenges for oil response agencies, particularly since such an incident had not been the subject of training for response agencies and had never before occurred in Australia's offshore environment.⁶⁰

⁵⁹ see AMSA, *Major Oil Spills in Australia* (2010)

http://www.amsa.gov.au/Marine_Environment_Protection/Major_Oil_Spills_in_Australia/ at 15 March 2010.

⁶⁰ Major oil Spill training is generally undertaken every two years in Australia. Previous training exercise have included oil spill in Botany Bay (training 2004), the collision of two ships in the Torres Strait (2004) and collision between a tanker and a general cargo ship at Port of Dampier (2000).

Another difficulty of the Montara Spill was the ongoing nature of the UHR. Generally, when the source of the oil pollution is either a ship-sourced leak or a grounding, there is the capacity to respond quickly to the source of the pollution, usually by pumping the oil to another vessel, thereby stopping the source of pollution. In this instance, the Montara well leaked hydrocarbons for a protracted length of time, with the capping of the well taking over three months, and hydrocarbons freely leaking for over 70 days. This creates many difficulties in spill response, since there is a continual source of fresh pollution.

There are many similarities between this oil spill and the *Exxon-Valdez* spill. Certainly on the surface there seem to be many differences: the *Exxon-Valdez* spill was a result of ship-sourced pollution, with vast amounts of heavy crude washing up onto thousands of kilometres of shoreline. However both the *Exxon-Valdez* and the *Montara* spills occurred in remote locations, far from equipment depots, and with little initial response from the responsible oil company. In each case, it appears that the oil company, as Combat Agency, was underprepared, with few resources to contain a spill. Certainly, the spill of the *Exxon-Valdez* was massive.

The *US Environmental Protection Agency*, in its assessment of the *Exxon-Valdez* incident, noted that Exxon was clearly not prepared for a spill of this magnitude.⁶¹ Furthermore, the report noted that the planning for and response to the *Exxon Valdez* incident was unequal to the task. It recommended that future contingency planning needs to incorporate realistic worst-case scenarios and to include adequate equipment and personnel to handle major spills. Critical to the success of contingency planning is adequate training in the techniques and limitations of oil spill removal. Furthermore, the EPA recommended that organizational responsibilities must be clear, and personnel must be knowledgeable about their roles. Finally, it recommended that exercises that fully test the response system must be undertaken regularly.⁶² In addition, it also recommended the faster deployment of oil spill response personnel and equipment at times of crisis.

Fortunately, the Montara oil spill was not a major spill like the *Exxon-Valdez*. However, the Montara spill similarly highlights a number of operational and training deficiencies within the NMOSCP and NATPLAN related to oil spills from oil platforms and operations in remote areas. It provides the opportunity to critically assess the current capacity to prevent and respond to activities which cause UHR, and to identify deficiencies in the regulation of and response to oil spill incidents from Oil and gas activities.

Recommendation:

The capacity of PTTEP to respond to an oil spill should be assessed.

⁶¹ US Environmental Protection Agency, *The Exxon Valdez Oil Spill: A Report to the President (Executive Summary)* (1990) <http://www.epa.gov/history/topics/valdez/04.htm> at 16 March 2010.

⁶² US Environmental Protection Agency, *The Exxon Valdez Oil Spill: A Report to the President (Executive Summary)* (1990) <http://www.epa.gov/history/topics/valdez/04.htm> at 16 March 2010.

The NATPLAN and NMOSCP should be revisited and reviewed, assessing the response to petroleum platform sourced pollution. The Commonwealth should consider creating and implementing a National Offshore Petroleum Activities Oil Spill Response Plan (NOPAOSRP) that specifically regulates the response to oil spills sources from offshore petroleum activities. This should encompass platforms, FPSO's, drilling rigs and other such structures.

Equipment depots

The submission by AMSA noted that it commenced aerial spraying of dispersants as a method of response to the oil spill on 23 August 2009, a full two days after the UHR. Until that time, there was little response to the spill other than oil trajectory mapping, and aerial flyover to gather intelligence for response planning.⁶³ Furthermore, AMSA notes that it deployed dispersant from the Darwin and the Australian Marine Oil Spill Centre (AMOSC), and organised fixed wing aircraft from Australia and Singapore.⁶⁴ This need to augment the dispersant stores in Darwin highlights the structure of the current equipment depot system. As noted previously, Australian offshore marine oil spill response is geared towards ship-sourced pollution, reflected in the location of equipment depots in Townsville, Brisbane, Sydney, Melbourne, Launceston, Adelaide, Freemantle Dampier and Darwin.⁶⁵

The Montara spill demonstrated that the insitu supply of dispersant was inadequate to respond to a relatively small spill. Should a major spill occur, response time would be hampered by the location of equipment in southern port areas, and only modest supplies in northern and western depots that are around 1000km apart. Given that oil and gas activities in the Northwestern offshore region have increased substantially, it is timely that the location and composition of oil spill equipment depots are reviewed, to ensure that these depots are placed in areas where UHR are likely to occur, and rapid response is needed.

Recommendation:

All depots be assessed, and consideration be given to the creation of additional depots along the Northwestern Western Australia coastline

⁶³ AMSA, *Submission by the Australian Maritime Safety Authority – commission of Inquiry into the Uncontrolled Hydrocarbon Release of Oil and Gas from the Montara Wellhead Platform in the Timor Sea* (2010), 9.

⁶⁴ AMSA, *Submission by the Australian Maritime Safety Authority – commission of Inquiry into the Uncontrolled Hydrocarbon Release of Oil and Gas from the Montara Wellhead Platform in the Timor Sea* (2010), 9.

⁶⁵ Australian Maritime Safety Authority, *National Plan: Australia's National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances* (NATPLAN) (2007), 5.4.

to ensure timely and effective response to oil spills resulting from petroleum activities in this area.

F. Other Matters

TR11. Consider, assess and make recommendations in relation to any other matters the Commission of Inquiry considers relevant to or arising from the Uncontrolled Release and the prevention of similar events occurring in the future.

The Montara oil spill was not an unusual occurrence. Human error has caused numerous blowouts and UHR in the offshore environment. What was unusual about this oil spill was that it took 106 days for the well to be capped, and the source of the pollution to be removed. For any country, but particularly a first world nation, this is a concern. Regulators and governments need to be addressing a number of difficult questions:

- Was the *regulatory framework* adequate, or was it too narrow and restrictive;
- Was the *response* of the regulators adequate;
- Was there *intergovernmental* consultation and assistance offered or provided to assist PTTEP in stopping the source of the pollution;
- Should Australia have *sought* international government and industry *expertise* or assistance to determine the best way to cap the well and halt the release of hydrocarbons into the Timor sea;
- Should Australia have *sought assistance* from neighboring countries?