Organisational and Technical Developments following recent spills

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The Australian petroleum industry has been facing the greatest amount of change over the last 4 years due principally to the Montara offshore loss of well control incident in 2009 and then again with the Macondo spill in 2010. These 2 incidents have affected industry in the same way that the Valdez spill affected the government and shipping industry in 1989 primarily through the entry into force of the OPRC 90 in 1995. From major reform in the Australian regulatory sector through to cultural change within each company the industry reactions to these spills have heightened awareness and expenditure in an effort to provide greater barrier protection in the prevention sector of offshore petroleum exploration and production.

The major organisational changes to the key agencies within the oil and gas sector have occurred within the regulatory areas. There has been a clearer defining of responsibilities within the regulatory bodies with post-Montara, a 'one stop shop' for the regulation of the environmental aspects for the offshore exploration & production sector being created and invested in the safety authority. Australia now clearly delineates the shipping industry and the offshore oil & gas industry into 2 separate statutory agencies. The maritime authority is solely designated as the shipping regulator (Australian Maritime Safety Agency) and the offshore petroleum safety regulator now has the jurisdictional responsibility for environmental protection (National Offshore Petroleum Safety Environmental Management Authority). This separation has created duplication in some areas of preparedness and response but was always designed to create efficiencies in regulatory processes and increase the governments and petroleum industry's awareness of risk in the offshore areas. Another direct result of this change has been a far greater degree of cooperation between individual companies in data, resource and knowledge exchange. This has been a key industry initiative in response to the greater level of compliance required by the offshore regulator.

The other consequence of the Montara spill for Australian industry has been an increased emphasis on equitable funding of the preparedness aspects of oil spill response between government and industry. This focus on equitable funding has created efficiencies in response areas including aerial dispersant contracts, trajectory modelling contracts and interoperability of response teams. Organisationally, the industry oil spill response organisation AMOSC has been growing to meet the needs of its 28 oil&gas members in the areas of preparedness and response compliance. Greater reliance on wider industry resources such as the Australian industry Core Group where 100 oil spill response skilled industry personnel are immediately available to AMOSC for mutual aid to a responsible party has also resulted from the 2 recent industry spills.

Coincidental to the Montara spill has been the review of risk around Australia (in 2011) and the changes to the National Plan to account for sectoral changes and the newly perceived areas of risk. By using an algorithmic projection to 2020, the risk of spills moves substantially from the offshore E&P sector into shipping and port/harbour operations. This occurs concurrently to the estimated decrease of crude production and the increase of gas production mainly on the Northwest Shelf of Australia. In turn, this has enabled Australian industry to look ahead on technological issues and place increased emphasis on source control. The offshore E&P operators have combined to procure a subsea debris clearance and dispersant injection toolkit for Australia – this complements the 2 OSRL toolkits and allows the Australian companies to put first strike steps into source control before accessing cap or containment systems.

Further technical developments in Australia by industry have included;

- developing an oiled wildlife capacity with plans, equipment trained personnel and importantly, international linkages;
- developing 'just-in-time' dispersant manufacture of around 70m³ per day for subsea use in lieu of stockpiling dispersant. The ability to decrease solvent ratios in the formula is also better served through JIT dispersant
- research into in-situ burning
- better understanding on using dispersant including subsea applications
- research into scientific monitoring plans around bio-remediation and water column sampling & measurements

The quantum of change over the last 4 years and since the 2 spill incidents of Montara and Macondo has been a re-invigorated energy around response and

preparedness issues to marine oil spills. The familiar question arises; how long will this motivation and energy last?