



July/August 2010

Greetings,

How can one incident bring an entire industry to its knees? In earlier days when the Oil and Gas industry was a conglomeration of regional players, a simple blow out, underwater or otherwise, would not have a dramatic impact on the rest of the world. But today, with the high-risk, high-volume aspects of oil production, the key players – National Oil Companies (NOC's) and the private firms (E&P and IOCs) – are linked as never before. With the recent BP disaster, the Oil & Gas industry will be forever changed, much as the Nuclear Power Industry was 30 years ago. We'll see regulations in the US affect the Oil and Gas firms just as the Three Mile Island (TMI) accident did for nuclear generation utilities in the 1980s. Dr. Kris R. Nielsen recently noted that "This BP event will be the TMI of the Oil and Gas Industry," and continued, "...the regulatory impact from offshore drilling incidents will affect all areas of the industry, including the oil and gas services sector, not just domestically but internationally as well."

Initially the regulatory reaction to the Gulf of Mexico (GoM) incident will be constrained to the United States. Government has a duty to protect the public, as well as protecting lands within the government purview. It also has a fiduciary responsibility to collect royalties through its agencies, in this case the former Minerals Management Service (MMS). The private sector also has the responsibility to do their business in a prudent, effective and safe manner. And in these relationships lay the rub – government can kill the industry with overwrought regulation, or it can regulate responsibly and encourage industry to perform to a level that benefits both the public and private domain.

The regulation developed in the United States will slowly spread throughout the world, with regional differences, of course. As Brazil develops deep water sources in the sub-salt areas, and as Angola and the rest of east Africa develop newly found reserves, there will be public pressure to adopt a regulatory structure that will prevent GoM style accidents from re-occurring.

Let's look at the TMI time line for guidance. For the first year after the incident, government struggled to determine a level of regulation that would assuage public safety concerns. Within the next three years the regulation spread from the "nuclear island" (the portion of the plant that contained the NSS reactor) to the plant itself, then eventually throughout the entire nuclear plant site. Public reaction was so strong that no new nuclear plants were ordered in the United States for 30 years.

As a result, the demand for increased generative capacity drove the industry to extend working life cycles of reactors through retrofitting and increased productivity. By 1999 the regulatory fights wore out as government recognized that nuclear had a place in the generation world and private industry realized that a culture of uncompromising safety was good business. Parenthetically the United States now has a system of nuclear generation plants that run at 90% capacity. Nuclear Energy regulations are now in sync with the industry. Everyone profits.

The Exxon Valdez spill drove Exxon Mobile to adopt a culture of safety that is unsurpassed in the Oil and Gas industry today. The *New York Times* recently noted:

“...before the Deepwater Horizon accident, the embodiment of a disastrous oil spill was the 1989 grounding of the Exxon Valdez,” which “...led to a profound rethinking of safety management at the company.” And now, “...Exxon stands out among its peers for its obsessive attention to safety, according to analysts and industry insiders.” The Times cites “...a case that bears many similarities to the Deepwater Horizon incident,” in which Exxon's safety “...system prevented what might have been a very serious accident, according to Exxon officials.” While drilling the Blackbeard exploration well in the Gulf of Mexico within this decade, Exxon came within 2,000 feet of the “...‘elephant’ field of around a billion barrels of oil and gas,” but “...the drilling team was getting nervous,” and Exxon chairman and CEO Rex W. Tillerson “...eventually sided with the drillers. The well was capped and abandoned, and Exxon wrote off Blackbeard as a \$187 million dry hole.”

It is fair to state that no regulatory requirements and no industry practices could have possibly foreseen the size and effect of the Deepwater Horizon incident and prevented it. But the Oil and Gas industry and the US Government now have a unique opportunity to “get it right” and getting it right means looking at past disasters (and they are disasters) and determining how we short circuit idiocy and blend reasonable regulation with reasonable responses from the industry.

In 1979 the Nuclear Power Industry and in 2010 the Oil and Gas Industry, technology and product demands were pushing the limits of everything: materials, pressures, response times, regulation, industry practices – everything. Neither internal safety requirements nor regulatory responses were keeping up. Both the Nuclear Regulatory Commission (NRC) in 1979 and the MMS in 2010 - the government - had clearly lost touch with its primary mission – to protect the safety and welfare of the public. But the Oil and Gas industry was clearly being more clever than smart. What can we expect in the future?

- Both industry and government should be able to shorten the timeline paths to regulatory and behavioral excellence from 30 years to 10 years.
- The Oil and Gas industry will become safer, as regulations spread around the world and become precautionary and preventative in their effect.
- BP and other companies will recover; they will adopt a culture of safety and excellence that other industries have adopted in response to a global backlash to their behavior.
- The balance between regulation and private initiative will be attained, but only after an earnest effort on the part of government to not over-regulate. That effort must be balanced with the private sector's earnest efforts to pursue safety, not as a result of government regulation but as a by-product of corporate culture.

The newest play in the US energy sector is the hydro fracturing for the production of Natural Gas. The current experiences of the Oil and Gas industries will drive the production climate to a level of consistency and predictability that should ensure that this emerging technology will be able to take its place in the energy field as a safe and viable production method. And hopefully we'll see the last “big one”. In the next decade the Oil & Gas industry and companies will become good corporate citizens

instead of the pariahs that they are perceived as being today - exactly as nuclear power utilities have become 30 years after TMI.

Thanks,

Pat, Kris and Jack

Industry Sectors

Oil and Gas

Pegasus-Global advises Deutsche Bank and participates in a “Roadshow” on the Gulf of Mexico (GoM) incident and its effects

Dr. Kris R. Nielsen and Dr. Patricia D. Galloway recently went to London on behalf of Deutsche Bank to visit and explain the implications of the GoM to several BP investors. Their contributions were highlighted in the “Key Messages” section of Deutsche Bank’s June publication “Pit Stop”:

“Recent trends and key highlights from Roadshow with Pegasus Global (PG)

Political and regulatory uncertainty surrounding deepwater and renewed safety standards and legislation across contracts should see project decisions delayed beyond H2 2010. In light of this and other bottlenecks surrounding FIDs (Final Investment Decisions) we continue to maintain our relatively bearish stance on Global Capex (our Jan 2010 outlook pointed to 4% decline in E&C (Engineering and Construction) spend vs. 2009).

The steps impacting the FID process as a result of GoM incident could involve: (i) determining the cause of the Macondo well failure; (ii) subsequently assessing the risks implying a period of reflection; (iii) assessing the situation post various (government) inquiries and estimates of potential cost exposure; and finally, (iv) dealing with what the regulators come up with and applying new safety processes globally (and homogeneously?) across organisations. PG expects greater accountability of Oil Co investments towards the media and politicians.”

Deutsche Bank noted that Pegasus-Global suggests that the GoM incident is a game changer. Deutsche Bank listed the following observations from the Roadshow with Pegasus-Global:

- *“Industry unlikely to carry on as before...”*
- *There will be a material “pause” in IOC project activity relating to deepwater...*
- *Expect increasing debate over the optimal portfolio energy mix going forward...*
- *Financial guarantees will be a company leveler (particularly in relation to the E&P and Oil Services sectors)...*
- *Oil service companies with track record and experience will gain market share (and perhaps command a greater premium?) at the expense of those that have not been around for as long....*
- *Push toward ‘cleaner energy’...”*

Dr. Nielsen categorized the visit as more energized due to the additional activity in the industry spurred by recent issues in the US Gulf of Mexico.

Pegasus-Global has been advising Deutsche Bank over the years, performing analysis and insight for the company and its investors. In an industry with interlocking high exposure relationships, one major company with one major incident can impact the entire industry for decades. Dr. Nielsen's analysis on the impact to the Oil and Gas industry from the GoM incident covered the services sector as well. He characterized the incident as "...the Three Mile Island of the Oil and Gas Industry" and emphasized how the impact of resulting regulatory efforts will hamper the industry for years to come, though he did not expect existing contracted projects to be canceled.

Infrastructure

CECAR5 Down Under

The Civil Engineering Conference in the Asia Region (CECAR) kicks off its 5th triennial conference on August 9 under the banner of "Innovative Community Building". Pegasus-Global's Dr. Nielsen, Jack Dignum and Dr. Galloway will be delivering a presentation titled "Leadership and Risks During a Global Financial Crisis" at the conference.

Dr. Galloway co-chaired the first CECAR conference in 1998 with Philippine Islands' President Fidel Ramos. The first three founding organizations of CECAR were the American Society of Civil Engineers, the Philippine Society of Civil Engineers and the Japan Society of Civil Engineers. Since its inception, Dr. Nielsen and Dr. Galloway have presented papers at all CECAR conferences.

To visit the CECAR site please follow this link: (<http://www.cecar5.com/session/363.asp>)

to read the Pegasus-Global paper please follow this link:

(<http://www.pegasus-global.com/newsletters/201007/CECAR-Leadership-and-Risks-During-a-Global-Financial-Crisis>)

Independent Review Panel Report for Columbia River Crossing due

The Governors of both Washington and Oregon have convened an Independent Review Panel to conduct a review of the Columbia River Crossing (CRC) Project. The IRP began its initial review in April this year and is due to submit their report to the Governors on July 30. Both Governors appointed Dr. Galloway as one of the members of the IRP tasked with reviewing the CRC's Project Implementation Plan, the financial plan, and performance measures.

The IRP's activities can be found at this link: (www.crcreview.org)

Power

Kansas City Power and Light

Dr. Nielsen is expected to present testimony in the coming weeks before the Kansas Corporation Commission on behalf of KCP&L in their rate case regarding the prudence of their construction of Iatan Unit 2, the new 850 MW super-critical pulverized coal-fired generation plant.

Progress Energy Florida

Dr. Galloway is expected to present oral testimony in August on behalf of Progress Energy Florida in their nuclear cost recovery docket before the Florida Public Services Commission concerning the prudence of decisions regarding the construction of Levy 1 and 2.

Pegasus-Global News

Dr. Galloway in the NSPE Spotlight

Dr. Galloway can be seen in the member spotlight position this month on the home page of the National Society of Professional Engineers (NSPE). The website also features an interview with Dr. Galloway, who has been a NSPE member since 1981. The National Society of Professional Engineers serves professional engineers throughout the United States, with representation on the state and local chapter levels as well. To visit the NSPE site please follow this link: (www.nspe.org.)

Pegasus-Global continues involvement with Life Support

Dr. Nielsen will participate in the Life Support annual fundraiser in August. Dr. Nielsen is the Chairman of the Board of Trustees for Life Support, and has guided the organization to its first partnership with a major Seattle hospital in order to provide a higher quality of local health care. He recently announced the health care partnership with the Swedish Hospital, a goal that Life Support has nurtured since its inception 10 years ago. Dr. Nielsen states, "I believe that Life Support is in the process of defining a new model for rural health care. But we could not have done it without the dedication of a fantastic crew of local volunteers. Well done, all!"

To learn more about Life Support, please please follow this link (www.lifesupporti90.org)

U.S. Women in Nuclear Conference to be held in Seattle

The Annual Women in Nuclear (WIN) conference will be held at the Westin Hotel in Seattle July 18 through July 21. The event is sponsored by the Navy Nuclear Propulsion Program and Energy Northwest. Along with Energy Northwest's Chairman Sid Morrison and AmerenUE representative Janese Neher, Dr. Galloway will be participating in a discussion on industry advocacy and outreach best practices, particularly apropos to the climate surrounding the resurgence of Nuclear Energy production in the United States. The conference is held by the Nuclear Energy Institute, the policy organization for the nuclear technologies industry.

To learn more please follow this link:

(<http://www.nei.org/newsandevents/conferencesandmeetings/uswin>)

Dr. Galloway appointed to National Science Board committees

Dr. Galloway, a member of the National Science Board (NSB), was recently appointed to the NSB's committees on Audit and Oversight, the subcommittee on Large Facilities, and the committee on Polar Activities, as well as, continuing her role as the Chair of the 60th Anniversary Committee of the National Science Foundation and the National Science Board.

Dr. Nielsen's blog...a View from the Boardroom

Dr. Kris R. Nielsen's blog will be available in the next few weeks. Keep checking back here...

(<http://aboardroomview.blogspot.com/>)

Pegasus-Global People



This month we would like to pay tribute to our friend and long-time associate Keith Madden, who recently passed away unexpectedly. In his lifetime Keith compiled an impressive list of accomplishments ranging from work in the minerals development, pulp and paper and power production as well as managing maintenance and infrastructure projects. He worked for Fluor Australia for 25 years before moving to Nielsen-Wurster Asia-Pacific, formerly part of Pegasus-Global Holdings.

Over the years we came to know Keith as a dedicated, intelligent engineer, capable of managing the smallest projects to the largest. He was a man of uncompromising integrity and honesty, and always brought a sense of “can-do” to any endeavor he was involved with. He lived his life and practiced his profession with depth, intelligence and care and will be sorely missed in the field of engineering.

Keith is survived by his wife, Jane and his two daughters Julia and Kathryn and his siblings Ian and Barbara.

Pegasus-Global's Bill Henry elected to Pan American Academy of Engineering

Pegasus-Global is pleased to announce the election of William P. Henry, P.E. to membership in the Pan American Academy of Engineering. Bill's membership in the Academy caps a life of dedication and excellence in the field of engineering. He will be inducted on October 21, 2010 in Buenos Aires.

The Pan American Academy of Engineering is sponsored by UPADI, the Pan American Union of Engineering Organizations, and represents 26 member countries throughout the Americas. The Pan American Academy of Engineering acknowledges significant progress in the engineering profession as well as serving as a centralized exchange for ideas and solutions throughout the Americas.