

## Role of the regulator

Good Afternoon. I'd like to start off by thanking Charlie Williams. It's always an honor to share the podium with Charlie. I'd also like to thank Rear Admiral Servidio for joining me this afternoon. I've invited him to join me in talking about technology and the role of the regulator.

Finally I'd like to thank the organizers for putting on another terrific event this year.

So we are here at OTC, surrounded by extraordinary displays of technology...showcasing capabilities that far exceed what was possible only a few short years ago, and underscoring the fact that the oil gas industry is one of the most innovative and complex on the planet. It is truly awe inspiring, and as a regulator, somewhat daunting to realize that this also poses a challenge for us (regulators).

Your industry sets a very aggressive pace, you are the source of new ideas and technology. The challenge for those of us who are regulators is to keep pace with you, and to understand the safety and

environmental implications of this technology, so that offshore resources can be developed without incident.

This then gets to the fundamental question of the role of the regulator, vis a vis the industry, and how we can collaborate in a meaningful way, all the while remaining true to our obligation to act first and foremost in the public interest.

I am a firm believer that we have overlapping goals. Offshore safety, protection of the environment from the potential ill-effects of industrial activity, developing offshore resources, all of these not only reflect public needs and expectations, that also represent good business practices. We have all seen how catastrophic events can adversely impact the environment, causing the public to lose confidence not only in the industry's commitment to safety but also in the regulator's ability to oversee offshore operations to ensure these activities are carried out responsibly. How then do we collectively and appropriately approach

the ongoing imperative of integrating new technology into an already complex operating and regulatory environment?

I think to maximize the constructive relationship between the regulator and the industry, we need to concentrate on three things: 1)

Technology itself, 2) the human element, and 3) what I believe ties the two together, an understanding of risk and how to effectively manage it.

#### FOCUS ON THE TECHNOLOGY:

Technology is appropriately the place to start, not only because of where we are gathered, but also because it is the object of so many of our regulatory requirements.

Traditionally, we have approached our duties by establishing standards in the regulations, and then relying on them as the basis for approving permit applications, and verifying compliance through on-site inspections. And as you know, many of the standards incorporated into our regulations are themselves based upon industry standards, the

development of which includes BSEE participation. We still rely on that basic approach, but regulations have always had a tough time keeping up with technological change. For that matter, industry standards are having a tough time keeping up as well. And that has become even more of a problem as the pace of technological innovation and change has accelerated.

We are addressing this in a number of ways...

- For one thing, we are beginning to put more performance-based language into our new regulations, which will make it easier to establish equivalency to the standard of safety envisioned;
- We also have initiated processes under the Deepwater Operation Plan regulations that can accommodate technological approaches not specifically envisioned in the regulations. In many ways, these processes reflect some of the same approaches used in countries that have adopted the safety-case approach to regulations. (By the way, I don't see us going all the way to a safety-case

approach; We have decided that the hybrid approach we follow in the United States best meets the expectations of Congress and the public for our role as regulators, but still moves us toward the goals envisioned by safety-case regimes. Other international regulators seem to be moving toward something more like a hybrid approach as well).

- And we have established the Ocean Energy Safety Institute to serve as a forum where industry, government, and academia can come together and explore the implications of emerging technology. The inaugural event for the Institute will be held next week, at the University of Houston, with the focus being risk management. We are planning future projects with the Institute on topics such as how to best assess and make a determination of Best Available and Safest Technology and system reliability. However, the Institute will only be successful with industry participation. It will be open, transparent, and collaborative, but your active participation is needed to make that happen.

## TECHNOLOGY CENTER

Our sense within BSEE is that we still need to do more, to up our game in technology assessment, work more closely with Original Equipment Manufacturers, participate more fully with standards-setting bodies, and strengthen our ability to assess novel and emerging technologies. Earlier this week, I announced our intention to establish a Technology Center within BSEE to achieve these goals. The Center will not replace the regulatory processes already in place at the regional level. Permit reviews and Deepwater Operations Plans will remain a function of our region and district offices. But it will add depth and capacity to the bureau, so that as industry continues to innovate and develop new capabilities, we will be keeping pace with you. It will support all of our region offices and will complement the work of the Ocean Energy Safety Institute . I will have more to say about this in the weeks and months ahead, but it is important enough, that I wanted to share it

with you here. We intend to establish the Technology Center here in Houston, but we still need to finalize details on a location and staffing.

### FOCUS ON THE HUMAN ELEMENT:

Technology is important, but so too is the human element. It takes people to operate, interpret, and make critical decisions as they employ technology. People establish the processes used to keep systems and operations safe, and only trained, committed people will ensure the integrity of complex processes.

I have recently begun to look into the characteristics of High Reliability Organizations. These are the organizations where failure is never an acceptable outcome. Think of Navy submarines, or nuclear power plants, or the space program.

These highly technical operations place a high premium on training, on redundant systems, and on absolute adherence to established processes. There is no cutting corners.

I would argue that your industry falls into much the same 'no-failure-acceptable' category, with the level of technology now employed. If used correctly, technology can make things much safer.. If misused or taken for granted, it can result in catastrophic loss.

In many ways, we began leading the industry toward becoming a high reliability organization or HRO with SEMS -- the performance-focused Safety and Environmental Management System for integrating and managing offshore operations. It was a significant step in the right direction. It introduced some of the elements of the safety-case approach, while at the same time resting on a standard baseline of regulatory compliance. It requires a more focused look at systems and how people fit into the work process. And it established obligations to speak up when unsafe conditions are observed, or when processes are not being followed.

We have much more work to do with SEMS. Although it set us on the right path, none of us should be satisfied that the goal of a widespread



safety culture within the industry has been achieved. Some companies may still think they can cut corners or regard SEMS as just a plan on a shelf. As we have seen, in some tragic cases, lives have been lost – needlessly – for failure to follow established safety processes.

I *am* grateful to those who have taken SEMS and the need for a comprehensive safety culture to heart, and because of the good work that I have seen, I am hopeful that -- working together -- we can collectively set an expectation of safety excellence throughout the industry. As we have seen in HRO's - this goal is within our grasp.

By the way, when we talk about the human element, I did want to note the youth-focused event sponsored by the OTC. These young people are our future. I applaud the efforts to get them interested in the important and meaningful work they may aspire to as they make career choices. Of course, we will be competing for their talents, as we compete for talent today – but that is OK! The important thing is to get them interested, and keep them engaged. We are doing much the same

thing within DOI and BSEE, with a formal effort to get them excited about this wonderful world of opportunity through engineering and the sciences. As part of Secretary Jewell's Youth Initiative to develop the next generation of lifelong conservation stewards and ensure our own skilled and diverse workforce pipeline, Interior will provide 100,000 work and training opportunities to young people within our bureaus and through public-private partnerships.

### FOCUS ON RISK

You have heard me use the word safety throughout my talk, and that is indeed my primary goal as a regulator, and as I mentioned, I believe it is a shared goal. We will continue to press forward on that theme, which brings me to the third area I wanted to address in the relationship between the regulator and the regulated... and that is: *risk*.

Or more precisely, *managing risk*, as an integral component of a safety culture. It must be the lens through which we view the interaction

between technology and the human element, it also is the foundation of how we regulate and enforce standards.

A lot has been written about risk, and I am sure you are all familiar with risk management theories. Although BSEE has begun to employ risk criteria in some areas, I believe we can employ risk tools to a far greater extent and to greater effect for safety.

For example....

- We are exploring a comprehensive risk-based inspection approach and have engaged a national laboratory to assist us in developing a robust risk methodology. The idea here is that not all companies manage their assets the same way, not all train their people the same way, and not all adhere to safety principles and processes the same way. This comes down to the not-too-surprising reality that some companies and facilities pose greater risks than others.

- Once we develop a solid risk methodology, we will have a basis for inspecting high-performing facilities and companies differently than those posing greater risks. We can afford a lighter touch in the high performers, whereas the poor performers will see us far more frequently. This is one way to incentivize good behavior!
- I mentioned SEMS earlier, and I believe it too can be improved through greater emphasis on risk methodologies. The “Bow-Tie” approach, which identifies risk events as well as prevention and mitigation barriers, holds great potential to take SEMS to the next level. I believe this approach would also contribute to our ability, or an independent auditor’s ability, to gauge the level of a company’s commitment to its own safety plan. Simply asking an offshore worker what barriers they are responsible for monitoring would be revealing. If that worker can tell you straight up, it’s a

good indicator that the plan is meaningful; a blank stare would tell us something else.

- BSEE investigates accidents, as you know, and information is shared. However, I believe we can improve the quality of information we provide, and in ways that would be broadly beneficial, in addition to the normal safety alerts. We ought to be providing you with overall trend information so you can gauge risks associated with similar activities on your facilities. It would broaden the aperture, and provide a window into events beyond your own company data. Again the goal is safety awareness, and we are heading in that direction.
- Likewise, we are developing a near miss reporting system. This has enormous potential to round out our understanding of safety problems which *were* potentially severe, but *were* averted. There

is a lot we can learn from these events, as we know from the aviation industry, where near miss reporting has generated valuable benefits for safety. I want to be clear, so no one will misconstrue my meaning.. Near miss reporting does not replace required incident reporting, or our investigation of actual events. Near miss events are those not presently required to be reported by regulation, but which nevertheless hold valuable safety lessons. The new program would be administered by the Bureau of Transportation Statistics and would guarantee anonymity for the reporting source. All I will be able to see, and all you will see, is aggregated information, which can then be used to broaden our understanding of risks, including leading indicators, and potential ways to mitigate them.

So: Technology, Human Factors, and Risk Management – those are three areas which I believe will define the nature of how we interact in

the coming years. In many ways, these have always been the case, but with increased complexity, the stakes are much higher.

One final thought. I have offered a perspective from BSEE, but we all know that you have multiple regulators. From the regulator's perspective, it makes sense to harmonize similar regulatory objectives, so that industry is not forced to adjudicate between two or more regulators on any given topic. I will say that the degree of harmonization has not always been what you might have hoped, or what we as regulators would feel is optimal. But the good news is that we are making federal consistency a priority within government that should result in greater clarity, consistency and predictability for all involved.

This level of coordination is important between BSEE and agencies like the Pipeline and Hazardous Materials Safety Agency, and EPA, but it is

especially important on a daily basis between BSEE and the Coast Guard. As we encounter new technology that poses many gray areas in our respective regulations, and as we deal with safety management and risk, it is imperative that we convey a consistent expectation to the regulated community. Having capped my 36-year career in the Coast Guard as the Deputy Commandant for Operations, I understand how important this is. For that reason, I want to turn the microphone over to RDML Servidio, who I have known for many years. I can attest that he is as passionate about this as we are in BSEE.

I look forward to hearing your thoughts in the Q&A and during the remainder of the conference!

Thank you.