



Bureau of Safety and Environmental Enforcement

Risk Identification and Mitigation for New Technology

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“To promote safety, protect the environment and conserve resources offshore through vigorous regulatory oversight and enforcement.”

BSEE: WHO ARE WE?

- Staffing

- 800+ Employees
- 200+ Engineers
- 120+ Inspectors

- Locations

- Washington, D.C. & Sterling, VA
- Three regional offices
 - ❖ Gulf of Mexico – New Orleans, LA
 - ❖ Pacific – Camarillo, CA
 - ❖ Alaska – Anchorage, AK



BSEE Regulatory Program

- Hybrid regulatory system
 - Regulations
 - ❖ Prescriptive requirements
 - ❖ Performance based
 - Standards
 - Permitting/plan approval



Challenges for New and Emerging Technology

- Unique equipment and processes
 - Lack of data and field experience.
 - No industry standards.
 - Expertise often with industry.
 - Understanding and mitigating risks
- BSEE Approaches
 - Deepwater Operations Plan
 - Use of independent third parties to review.
 - Research program and projects.
 - NASA Probabilistic Risk Assessments for O&G

Probabilistic Risk Assessment (PRA)

- Quantitative method for identifying and assessing risks in complex technology
- History in U.S.
 - Nuclear Regulatory Commission - 1975
 - NASA – 2003
- **BSEE/NASA Partnership**
 - 2016- Five year interagency agreement signed
 - Focused on application of PRA to offshore technology
 - Goal: Provide tools to assess and communicate risks
 - Deliverables – Draft guide for use of PRA in offshore oil and gas industry.

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