



Institutional Recommendations

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In this Working Paper, we make the following recommendations to the Commission and BOEMRE regarding the legal and regulatory framework for preventing major accidents in offshore oil and gas operations.

We define major accidents as operational failures or loss of control incidents arising during exploratory drilling or production activities which can cause harms to worker health and safety, the offshore and coastal environments, and the social and economic interests within those environments.

We accept the interim findings on legal and regulatory issues made by the National Commission's Subcommittee on Regulatory Oversight (October 13, 2010) and the National Academy of Engineering in its Interim Report (November 16, 2010).

Therefore, we make the following recommendations consistent with these findings and believe they would be important means of implementing the findings.

Recommendations

NEPA and Worst Case Scenario: Compliance by BOEMRE and permit applicants pursuant to the National Environmental Policy Act² must be based on context-specific and activity-specific information (not boilerplate) and estimation of the reasonably foreseeable impacts of routine operations, accidents and other non-routine incidents on the human and natural environments. In addition, a worst case scenario which reflects technical expertise and the plausible concerns of others whose interests may be impacted (i.e., stakeholders) must be evaluated by BOEMRE as part of the NEPA process and subsequently be used for the purpose of determining whether a permit will be granted with special conditions for minimizing the likelihood of the worst case and for minimizing its impacts if it does occur.³

Regulatory Roles: Jurisdiction and responsibilities must be clarified to resolve current uncertainties regarding the regulatory and inspection roles of the Coast Guard, BOEMRE, OSHA, and EPA for mobile rigs and fixed installations offshore.⁴ In this regard, BOEMRE should enact a rule to clarify and coordinate responsibilities at multi-employer work sites and ensure compliance

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² 42 USC 4321, et seq.

³ V. Flatt, <http://www.newsobserver.com/2010/07/05/563107/what-if-drilling-goes-really-wrong.html>.

⁴ Numerous Memoranda of agreement and Understanding between these agencies over the years have led to many regulatory uncertainties. M. Baram, *Preventing Accidents in Offshore Oil and Gas Operations: the US Approach and Some Contrasting Features of the Norwegian Approach* (Sept. 2010) ,> <http://ssrn.com/abstract=1705812><. Also National Academy of Engineering, *Interim Rpt. on Causes of the Deepwater Horizon Oil Rig Blowout and Ways to Prevent Such Events* (Nov. 16, 2010).

with applicable regulations and procedures by the party holding the permit and its contractors, subcontractors, and service providers.⁵

Worker Safety and Health: Priority should be given to resolving current uncertainties regarding regulatory and inspection roles of BOEMRE and the Coast Guard for worker safety and health,⁶ and to enactment of a process safety management rule (which includes provisions for management of change), similar to OSHA’s process safety management standard for onshore oil and gas operations.⁷

Worker Safety and Health: In assuming responsibilities for worker safety and health, BOEMRE should enact workplace safety and health regulations which are integrated with and reinforce its accident prevention requirements, and not assume that accident prevention requirements alone provide sufficient protection for worker safety.⁸ In this regard, BOEMRE should require by rule that a worker safety representative be appointed at each installation to participate in operational decisions and be empowered to suspend operations when the representative believes in good faith that continuation of operations would imminently endanger worker safety. These are key features of proven value in the Norwegian regulatory approach to safety at industrial facilities.⁹

Safety and Environmental Management System (SEMS): BOEMRE’s new SEMS rule marks the first time that a federal agency will directly regulate the structure and core functions of the safety management system of an offshore operator. The SEMS rule mandates operator fulfillment of eleven broadly stated safety management functions (and compliance with other requirements for self-auditing, documentation, and reporting).¹⁰ The rule also explicitly provides that compliance with the functional requirements will involve operator implementation of standards and practices developed by the American Petroleum Institute and other industrial organizations, and for enforcement when operators do not fulfill the designated functions. This new approach raises several issues¹¹ that need to be addressed by BOEMRE:

- Given that each company’s fulfillment of the functional, performance-based requirements will be based in part on consideration of the special features of its operation and thus differ in several respects from what each other company does for compliance, BOEMRE needs to ensure that each company’s compliance with SEMS affords equivalent protection for workers and the environment.
- Because the current checklist approach to inspection which involves policing companies for PINC’s (potential incidents of non-compliance) by relatively inexperienced inspectors has been used for ensuring compliance with

⁵ In this regard, OSHA Instruction CPL 02-00-124 should be considered.

⁶ M. Baram, note 2 supra. Also “Coast Guard Says it Oversees Offshore Oil Rig Safety, Lawmakers Cite Regulatory Disarray”, 40 OSHR 537 (June 24, 2010); and Hearings, Committee on Education and Labor.

⁷ OSHA standard at 29 CFR 1910.119.

⁸ Numerous studies indicate the value of worker involvement in offshore safety management, e.g., P. Bentley et al, *Development and Implementation of an HSE Management System in Exploration and Production Companies*, Society of Petroleum Engineers (1994).

⁹ S. Martorell et al, *Stop in the Name of Safety-The Right of the Safety Representative to Halt Dangerous Work*. In *Safety, Reliability and Risk Analysis* (2009).

¹⁰ Safety and Environmental Management Systems: Final Rule, 75 Fed. Reg. 199 (October 15, 2010) 63610. et seq.

¹¹ M. Baram, *Self Regulation and Safety Management*, Working on Safety Conference (September 7, 2010).

<http://www.wos2010.no/presentations.php>.

prescriptive and detailed technical standards and rules,¹² it is inadequate for holistic evaluation of compliance with the broadly-stated functional requirements of the SEMS rule. Therefore, BOEMRE needs to ensure that inspection pursuant to the SEMS rule is conducted by highly qualified personnel who are capable of fully evaluating company efforts to meet the performance-based functional requirements, and capable of offering regulatory guidance when necessary.¹³

- BOEMRE must also ensure that the API and other industrial safety standards and recommended practices relied upon by companies for compliance with the SEMS rule are qualitatively sufficient in terms of the technical state of the art, and are not compromised by the economic interests and lobbying activities of the membership of the industrial standard-setting organizations.¹⁴ Because the procedures used by such organizations for developing industrial standards and recommended practices are not transparent nor permit access by non-industrial stakeholders, BOEMRE should also conduct transparent “regulatory forums” in which existing industrial standards and the need for additional industrial standards pertinent to the SEMS rule are discussed with participation by non-industrial stakeholders.¹⁵

Oversight of Contracts: BOEMRE should maintain oversight of the contracts between the permit holder and its contractors and other service providers to ensure that any fee incentives based on reduced time and costs of performance do not compromise the professional quality of the contracted work in ways which would undermine operational safety.¹⁶

Cost Benefit Analysis: BOEMRE should secure the cooperation of OMB/OIRA in ensuring that enactment of new regulations it finds necessary for accident prevention are not obstructed by unduly stringent application of cost-benefit analysis.¹⁷

Safety Culture: BOEMRE should establish an advisory committee on safety culture to give meaning to this concept and provide guidance for its establishment and maintenance within offshore industries. The concept has been loosely used in a judgmental way to summarize why a company experienced an accident. But the safety culture concept has not been clearly defined, nor its ingredients identified, other than that it involves, for example, organizational learning from accidents and near miss incidents, more than regulatory compliance, internal reporting and lively discourse on safety matters, ethics in decision-making, and leadership which promotes continuous

¹² PINC’s at <http://www.boemre.gov/regcompliance/inspect.htm>.

¹³ M. Baram, *Preventing Accidents in Offshore Oil and Gas Operations: the US Approach and Some Contrasting Features of the Norwegian Approach* (Sept. 2010)). <http://ssrn.com/abstract=1705812>.

¹⁴ M. Baram, Id. Also NAE Rpt., note 3 supra.

¹⁵ The Norwegian model for regulatory forums is instructive.

See <http://www.ptil.no/regulatory-forum/category168.html>.

¹⁶ For an approach used in the realm of federal contracts, see DFARS 216.405-270: Award fee reduction or denial for jeopardizing the health or safety of Government personnel.

http://www.acq.osd.mil/dpap/dars/dfars/html/current/216_4.htm#216.405-270.

¹⁷ A. Sinden, OMB Regulatory Hit List, Ctr. For Progressive Regulation.

<http://www.progressivereform.org/perspOMB.cfm>.

improvement. An interdisciplinary advisory committee could advance the concept and provide guidelines for its implementation and measurement, as is being done in other industrial sectors.¹⁸

Acronyms

Acronym	Definition
API	American Petroleum Institute
BOEMRE	Bureau of Ocean Energy Management, Regulation and Enforcement
EPA	Environmental Protection Agency
NEPA	National Environmental Policy Act
OIRA	Office of Information & Regulatory Affairs
OMB	Office of Management & Budget
OSHA	Occupational Safety and Health Act
PINC	Potential Incidents of Non-Compliance
SEMS	Safety and Environmental Management System
OSHA	Occupational Safety and Health Act

¹⁸ M.Baram, M. Schoebel, Safety Culture and Behavioral Change at the Workplace, 45 Safety Science 631-636 (2007).