Harvard Law School
Emmett Environmental Law & Policy Clinic

6 Everett Street, Suite 4119
Cambridge, MA 02138
617.496.2058 (tel.)
617.384.7633 (fax)

March 20, 2013

By Electronic Submission to www.regulations.gov and Email to Keith.Petka@bsee.gov

Keith Petka
U.S. Department of the Interior
Bureau of Safety and Environmental Enforcement
Attention: Regulations and Standards Branch (RSB)
381 Elden Street, HE-3313
Herndon, Virginia 20170-4817

    Re: Draft Safety Culture Policy Statement, Docket ID. BSEE-2012-0017

Dear Mr. Petka:

  We write on behalf of Harvard Law School's Emmett Environmental Law and Policy Clinic ("ELPC")[1] in response to the Bureau of Safety and Environmental Enforcement's ("BSEE") request for comments on its Draft Safety Culture Policy Statement, 77 Fed. Reg. 75443 (Dec. 20, 2012) (hereinafter "the Policy"). ELPC has been actively engaged in issues relating to improved management of offshore drilling with a special focus on protecting the Arctic region. In June 2012, ELPC published a White Paper entitled "Recommendations for Improved Oversight of Offshore Drilling Based on a Review of 40 Regulatory Regimes."[2] This work has led to an ongoing dialogue with policy-makers and a variety of stakeholders. In addition, ELPC is currently developing a set of indicators for benchmarking the environmental performance of companies planning to drill in the Arctic. ELPC expects to publish these during the summer of 2013.

  ELPC commends BSEE for drafting the Policy and challenges BSEE to take this opportunity to envision a culture of safety that goes beyond occupational and process safety to meet the imperative of the Outer Continental Shelf Lands Act (the "Act") to protect the environment. 43 U.S.C. § 1332(3). While the concept of process safety includes an aspect of

---

[1] The ELPC works on a variety of local, national, and international projects covering the spectrum of environmental law and policy issues under the direction of Wendy B. Jacobs, Esq., a Clinical Professor at Harvard Law School and Director of the ELPC. These comments are authored by Elisabeth Costa and Jocelyn Sedlet, active members of the Clinic and students at Harvard Law School, and Wendy B. Jacobs.

[2] Doug Hastings et al., *Recommendations for Improved Oversight of Offshore Drilling Based on a Review of 40 Regulatory Regimes,* Harvard Law School, Emmett Environmental Law & Policy Clinic, Cambridge, Mass.: June 2012.

environmental protection (i.e., prevention of accidental catastrophes that cause environmental damage),[3] process safety is not broad enough to "protect" the environment as required by the Act and BSEE's mission statement.[4] Protection of the environment requires more than prevention of oil and chemical spills. It requires daily thinking about ways to minimize the adverse impacts – large and small, current and future – of industrial operations on the environment. BSEE should seize this opportunity to inspire a shift in organizational values and behaviors to embrace environmental health, safety and protection as a necessary component of a "safety" culture. If the purpose of the Policy is really, as it claims, to inspire a "collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment,"[5] then the Policy must guide organizations to design a safety culture that embeds a meaningful commitment to environmental safety and protection.

The time is ripe to change the prevailing attitude that "safety" and environmental protection are discrete concepts that can be compartmentalized and considered at different times by different people in organizations. Separation of safety and environmental protection is a false and harmful dichotomy. Yet, it is the prevailing culture. The dichotomy is routinely reflected in corporate sustainability reports and filings with the Securities and Exchange Commission[6] and in studies of corporate culture.[7] BSEE has an opportunity to push for meaningful cultural reform through the Policy.

In addition to bridging process safety with environmental health and safety, the Policy should be sufficiently flexible to adapt to offshore drilling anywhere it occurs and as new circumstances arise. While some of the safety and environmental challenges posed by the Arctic are similar to those associated with drilling elsewhere on the outer-continental shelf ("OCS"), Arctic drilling poses unique challenges related to extreme climate, fragile biodiversity, proximate native populations, long periods of ice and darkness, and lack of shore-based infrastructure.[8] It is

---

[3] JAMES A. BAKER, III, ET AL., THE REPORT OF THE BP U.S. REFINERIES INDEPENDENT SAFETY REVIEW PANEL 21 (2007) [hereinafter THE BAKER REPORT] ("'process safety' refers to the prevention and mitigation of unintentional releases of potentially dangerous material or energy…Generally speaking, process safety relates to the quantity, quality, and variety of controls or protective features that protect people, the environment, and property from process hazards.").

[4] *See* Bureau of Safety and Environmental Enforcement, *About* BSEE, http://www.bsee.gov/About-BSEE/index.aspx (last visited March 10, 2013) ("BSEE works to promote safety, protect the environment, and conserve resources offshore through vigorous regulatory oversight and enforcement.").

[5] The Policy at 75444.

[6] See discussion at pages 14-15, *infra*.

[7] See discussion at pages 6-7, *infra*.

[8] *See, e.g.*, PORTA, L. AND BANKES, N., THE PEW ENVIRONMENT GROUP, BECOMING ARCTIC-READY: POLICY RECOMMENDATIONS FOR REFORMING CANADA'S APPROACH TO LICENSING AND REGULATING OFFSHORE OIL AND GAS IN THE ARCTIC (2011); NATIONAL COMMISSION ON THE BP DEEPWATER HORIZON OIL SPILL AND OFFSHORE DRILLING, OFFSHORE DRILLING IN THE ARCTIC: BACKGROUND AND ISSUES FOR THE FUTURE CONSIDERATION OF OIL AND GAS ACTIVITIES, STAFF WORKING PAPER NO. 13 (2011), *available at* http://www.oilspillcommission.gov/sites/default/files/documents/Offshore%20Drilling%20in%20the%20Arctic_Bac

important for BSEE to put a robust policy in place now so that oil and gas companies and their contractors are better prepared to protect people and the environment in the face of the challenges and risks associated with Arctic drilling.[9] Measures to avoid catastrophic accidents and reduce other damaging industrial impacts on the Arctic are critical because the region is home to a rich biodiversity and native populations whose lives, sustenance and culture are inextricably intertwined with and dependent upon the health and safety of the marine environment.[10]

ELPC Has Three Major Criticisms of the Policy, as Drafted

The Clinic supports BSEE's goal of establishing a positive safety culture, and the Policy marks an important first step toward achieving that goal. As written, however, the Policy has three significant flaws. First, the Policy is too narrowly focused on a constricted notion of "safety" as preventing catastrophic accidents. As written, the Policy addresses only one source of harm to the environment: industrial accidents. While it is critical to prevent accidents of all sorts, accident prevention is not synonymous with safety. A true "culture" of "safety" is broader and protects against intended as well as unintended danger and damage to persons, property and the environment. Accordingly, the Policy should inspire a core set of values, attitudes and behaviors that aim to reduce all manner of risk and adverse impact to humans and the environment. For example, while it is absolutely critical to prevent an explosion that takes lives and spills oil, it is equally important to consider in advance how best to maximize the "safety" of the response to an accident – the use of chemical dispersants, for example, may cause collateral injuries and damage that could be avoided by a broader "safety culture."   Likewise, it is imperative to conceive, design and locate the pipelines that will carry the oil and gas to shore so as to minimize their near-term and long-term, cumulative, adverse impacts on the marine environment. Mere compliance with laws that require environmental reviews and analyses is not enough. Embedding into the organizational "culture" a genuine regard and value for the aspect of "safety" that derives from the health of the environment is crucial for stimulating innovation[11] and for ending the false dichotomy between safety and environmental protection.[12]

kground%20and%20Issues%20for%20the%20Future%20Consideration%20of%20Oil%20and%20Gas%20Activities_0.pdf.

[9] *See* COMMITTEE ON THE EFFECTIVENESS OF SAFETY AND ENVIRONMENTAL MANAGEMENT SYSTEMS FOR OUTER CONTINENTAL SHELF OIL AND GAS OPERATIONS, TRANSPORTATION RESEARCH BOARD, EVALUATING THE EFFECTIVENESS OF OFFSHORE SAFETY AND ENVIRONMENTAL MANAGEMENT SYSTEMS, SPECIAL REPORT 309, 20 (2012) [hereinafter TRB SPECIAL REPORT] ("the existence of an effective safety culture is fundamental to the creation of a safe work environment.").

[10] *See, e.g.,* Ana Núñez, Center for International Environmental Law, *The Inuit Case Study* (2007), *available at* http://www.ciel.org/Publications/Climate/CaseStudy_Inuit_Sep07.pdf.

[11] *See* BOB GRAHAM, ET AL., NATIONAL COMMISSION ON THE BP DEEPWATER HORIZON OIL SPILL AND OFFSHORE DRILLING, REPORT TO THE PRESIDENT, DEEP WATER: THE GULF OIL DISASTER AND THE FUTURE OF OFFSHORE DRILLING vii (2011) [hereinafter GRAHAM DEEP WATER REPORT] (emphasizing that "[f]undamental reform will be needed in both the structure of those in charge of regulatory oversight and their internal decisionmaking process to ensure their political autonomy, technical expertise, and their full consideration of environmental protection concerns.").

ELPC's second criticism of the Policy is that, as written, it is internally inconsistent with regard to the priority accorded to "safety" when balanced against competing goals. In some places, the Policy directs that "safety" be emphasized "over competing goals."[13] In other places, however, the Policy permits "production goals" to be balanced evenly with or even elevated above safety and environmental protection.[14] Safety should not be sacrificed to production goals.

The third flaw is that the Policy fails to provide specific guidance about implementation or any mechanisms for ensuring that companies implement the Policy effectively and transparently. For the Policy to be effective, BSEE must ensure that companies take meaningful actions to implement it and not simply pay lip service to it through paperwork.[15] Ensuring successful implementation requires two substantive revisions to the Policy. First, the Policy must be more specific about what actions must be taken by companies to achieve and sustain an organizational culture that will effectively address process safety <u>and</u> environmental protection.[16] BSEE should provide a clear, detailed menu of actions that a company could take to implement the Policy. Second, BSEE should develop and include a process to evaluate the effectiveness of and make improvements to the Policy on an ongoing basis. ELPC recommends strategies for enhanced data collection, targeted stakeholder engagement, and shared learning from international best practice such as the United Kingdom Step Change partnership.[17]

The Policy needs to be broadened and strengthened. In our comments below, we offer specific recommendations, and we suggest answers to the questions posed in the Request for Comments.

---

[12] Many in the regulatory and drilling industry have come to use the term "safety" as shorthand for workplace and process safety with a view to preventing catastrophic accidents but not with a view to maintaining a safe and healthy environment. Evidence for this routinely appears in corporate sustainability reports and filings with the Securities and Exchange Commission ("SEC"). The Policy provides an opportunity to remedy this unfortunate dichotomy. ROYAL DUTCH SHELL PLC, FORM 20-F (ANNUAL AND TRANSITION REPORT (FOREIGN PRIVATE ISSUER)) 50 (filed March 15, 2012) [hereinafter ROYAL DUTCH SHELL REPORT], *available via* EDGAR online; CHEVRON, 2011 ANNUAL REPORT 3 (2011) [hereinafter CHEVRON ANNUAL REPORT], *available at* http://www.chevron.com/annualreport/2011/documents/pdf/Chevron2011AnnualReport.pdf.

[13] The Policy at 75443 (column 1) ("commitment . . . to emphasize safety over competing goals").

[14] *Id*. at 75444 (column 1) (recognizing the "need" to "balance [safety] with competing performance objectives to achieve optimal protection *without compromising production goals*.") (emphasis added).

[15] *See* NANCY G. LEVESON, ENGINEERING A SAFER WORLD: SYSTEMS THINKING APPLIED TO SAFETY 429 (Massachusetts Institute of Technology 2011); *see also* Jennifer Howard-Grenville, Jennifer Nash, and Cary Coglianese, *Constructing the License to Operate: Internal Factors and Their Influence on Corporate Environmental Decisions*, 30.1 LAW & POLICY 73, 82 (2008).

[16] *See* LEVESON, *supra* note 15, at 422 ("The [safety culture] policy should be explicit and state in clear and understandable language what is expected, not a set of lofty goals that cannot be operationalized.").

[17] Step Change in Safety, *About Step Change,* http://www.stepchangeinsafety.net/about/workgroups/workforce-engagement.cfm (last visited March 13, 2013).

Organization of Comments

These comments address each of the seven questions raised in BSEE's request. We address questions three and four at the outset in order to highlight the necessary integration of environmental health, safety and protection into the concept of "safety culture" and the importance of prioritizing safety over competing corporate goals. In response to questions one and two, we offer concrete recommendations to strengthen the Policy through increased specificity and guidance for companies. We then address the importance of assessing the effectiveness of a company's safety culture and of monitoring compliance with the Policy, and we recommend specific actions BSEE can take to improve its ability to assess a company's safety culture, in response to BSEE's fifth question. Lastly, the comments address questions six and seven, discussing the broader regulatory and non-regulatory policies BSEE can employ to encourage safety and environmental protection on the OCS. These recommendations include strategies for engaging stakeholders in the dialogue.

>*BSEE Question 3: The draft Safety Culture Policy defines safety culture as the "core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety, over competing goals, to ensure protection of people and the environment" Please comment on any parts of this definition that need further clarification to be useful for operations on the OCS.*
>
>*BSEE Question 4: The draft policy statement states, ``it is important for all lessees, the owners or holders of operating rights, designated operators or agents of the lessee(s), pipeline right-of-way holders, State lessees granted a right-of-use and easement, and contractors to foster in personnel an appreciation for the importance of safety, emphasizing the need for its integration and balance with competing performance objectives to achieve optimal protection without compromising production goals." Given the diversity among OCS activities regulated by BSEE, please comment on the need to provide further clarification on this statement.*
>
>**Summary of ELPC Comment: The Policy must recognize that environmental health and safety is broader than prevention of catastrophic oil and chemical spills. The Policy must clearly and consistently emphasize the importance of environmental health and safety in addition to human safety. In addition, human and environmental safety must take priority over competing performance and production goals.**

BSEE correctly and appropriately defines safety culture "to emphasize safety, over competing goals" and "to ensure protection of people and the environment."[18] This focus on the interdependence of human and environmental safety, and their priority over competing objectives, is critically important. For offshore drilling to be truly "safe," a company's culture must focus not only on preventing catastrophes, but also on preserving the biodiversity, health and safety of the marine ecosystem. The Outer Continental Shelf Lands Act itself emphasizes

---

[18] The Policy at 75444.

the importance of environmental protection: "the outer Continental Shelf is a vital national resource reserve held by the Federal Government for the public, which should be made available for expeditious and orderly development, *subject to environmental safeguards*…." 43 U.S.C. § 1332(3)(emphasis added).

Although the overarching definition of "safety culture" in the Policy is appropriately broad, the details of the Policy focus on process safety[19] and worker safety and do not meet the commitment to ensuring human or environmental protection, broadly understood. This separation or compartmentalization of "safety" as distinct from "environmental protection" reinforces the false dichotomy reflected in current oil and gas corporate disclosures and reports. For example, Royal Dutch Shell's 2011 Annual Report makes no mention of environmental health, safety, or protection at all in its description of its safety culture policy.[20] BP's 2011 Annual Report also discusses "safety" and "environmental and social responsibility" separately, without linking the two concepts.[21] In Chevron's 2011 Annual Report, the introductory note from the Board Chair states that "to achieve [its] goal of zero incidents, [Chevron has] deployed systems and processes that helped drive down injury rates to industry- leading levels."[22] The report later states that "we will not be satisfied until we have zero incidents — no one injured."[23] While Chevron includes "environmental stewardship" along with "the safety of our people" in its requirements for "operational excellence," it fails to include environmental damage in its definition of an "incident."[24]

This dichotomy is further confirmed in two recent governmental reports. One, published by Norwegian Det Norske Veritas ("DNV") for use by the Norwegian Coastal Administration, surveyed Shell, Statoil, Total, Conoco Phillips, BSEE, and the Canadian National Energy Board, found that when describing important aspects of health, safety, and environmental systems, the surveyed organizations focused narrowly on occupational safety issues and did not mention environmental issues.[25] The other, prepared by the National Academy of Engineering and National Research Council, also found that the term "safety" is often more narrowly assumed to

---

[19] See definition in THE BAKER REPORT, *supra* note 3.

[20] ROYAL DUTCH SHELL REPORT, *supra* note 12, at 50.

[21] BP, ANNUAL REPORT AND FORM 20-F 2012, 46-54 (filed 2013), *available via* EDGAR online.

[22] CHEVRON ANNUAL REPORT, *supra* note 12, at 3.

[23] *Id.* at 7.

[24] *Id.* at 3.

[25] DET NORSKE VERITAS (DNV), EPPR RP3 REPORT: RECOMMENDED PRACTICES FOR ARCTIC OIL SPILL PREVENTION, APPENDIX III 6 (2012), *available at* http://www.arctic-council.org/eppr/wp-content/uploads/2012/08/EPPR-RP3-Best-Practices-report-v3.1-31aug121.pdf. The survey asked respondents, "[w]hat are the best examples of HSE practices/systems and their common elements?" Responses included "[e]lements related to training" and "[e]lement for avoiding accidents and incidents."

be workplace safety, even though "a focus only on occupational safety will not ensure system [process] safety."[26]

The Policy perpetuates this attitude by focusing too narrowly on process safety and prevention of catastrophic damage to the environment. A broader view of environmental safety (protection) is needed. The narrow view limited to accident prevention sends the wrong message, particularly in light of the fact that, as BSEE acknowledges, companies are often faced with competing priorities.[27]

Furthermore, in response to question 4 of BSEE's request, we point out that the Policy is internally inconsistent with regard to the priority accorded to "safety" when balanced against competing goals.[28] In some places, the Policy directs that "safety" be emphasized "over competing goals."[29] In other places, however, the Policy permits "production goals" to be balanced evenly with or even elevated above safety and environmental protection.[30] Safety should not be sacrificed to production goals. The Policy should be revised to clarify – and emphasize – the paramount importance of human and environmental protection.[31] Neither human nor environmental protection should be compromised in pursuit of corporate profits.

Additionally, the tradeoff may not be as stark as the Policy suggests. Sacrificing human safety and environmental protection for production goals in the short run may in fact negatively affect a company's economic performance in the long run. The Policy should also include a specific directive to management that human and environmental protection is a priority, even against competing production goals.

The Nuclear Regulatory Commission's ("NRC") safety culture policy,[32] on which BSEE's Policy is modeled,[33] uses the same overarching definition of safety culture as BSEE has

---

[26] NATIONAL ACADEMY OF ENGINEERING AND NATIONAL RESEARCH COUNCIL, COMMITTEE FOR ANALYSIS OF CAUSES OF THE DEEPWATER HORIZON EXPLOSION, FIRE, AND OIL SPILL TO IDENTIFY MEASURES TO PREVENT SIMILAR ACCIDENTS TO THE FUTURE, MACONDO WELL DEEPWATER HORIZON BLOWOUT: LESSONS FOR IMPROVING OFFSHORE DRILLING SAFETY 91, 119-20 (2011)(report defines "system safety" to include "[h]azards that can cause catastrophic effects," such as "accidents . . . involving multiple fatalities, substantial property loss, and extensive environmental damage.").

[27] The Policy at 75444.

[28] TRB SPECIAL REPORT, *supra* note 9, at 22 (management should "ensure that mixed messages for competing priorities are not the norm.").

[29] The Policy at 75443 (column 1) ("commitment . . . to emphasize safety over competing goals").

[30] *Id*. at 75444 (column 1) (recognizing the "need" to "balance [safety] with competing performance objectives to achieve optimal protection *without compromising production goals*.") (emphasis added).

[31] TRB SPECIAL REPORT, *supra* note 9, at 25-26 ("Without a framework that keeps safety concerns elevated to an appropriate level, inefficient, even disastrous, decisions will ultimately be made.").

[32] Nuclear Regulatory Commission Final Safety Culture Policy Statement, 76 Fed. Reg. 34773, 34777 (June 14, 2011).

used in the Policy.[34] However, NRC's safety culture policy consistently emphasizes a "safety-first focus."[35] NRC's policy does not, as BSEE's Policy does, permit the elevation of production goals above safety.

> *BSEE Question 1: The draft Safety Culture Policy Statement provides a description of attributes that are important to safety culture, (i.e., safety culture characteristics). What characteristics relevant to a particular type of OCS activity do not appear to be addressed in this notice?*

> *BSEE Question 2: What safety culture characteristics, described in the draft Safety Culture Policy Statement, do not contribute to safety culture on the OCS and, therefore, should not be included?*

> **Summary of ELPC Comment: The Policy should identify specific features of an effective safety culture and include a procedure for reviewing and assessing safety culture implementation.**

A safety culture policy is not self-executing. Nancy Leveson, an expert on safety culture,[36] notes that there are two aspects of a safety culture policy: a "philosophical statement" and "details about how the policy will be implemented."[37] A critical part of developing a strong policy is ensuring that companies not only adopt the policy, but also effectively implement it.[38] It is the implementation, continuous review, and revision of a policy that results in a safety culture that truly permeates a company.[39] BSEE's Policy, as drafted, provides goals, but fails to identify either specific features of an effective safety culture or the actions a company should take to implement each of the nine "characteristics of a robust safety culture."[40] Additionally, BSEE indicates that the Policy applies to "individuals, both internal to the BSEE and external,

---

[33] The Policy at 75444.

[34] *Cf.* 76 Fed.Reg. at 34777 *with* 77 Fed.Reg. at 75444.

[35] 76 Fed. Reg. at 34774.

[36] Nancy Leveson is Professor of Aeronautics and Astronautics and also Professor of Engineering Systems at MIT. She is an elected member of the National Academy of Engineering (NAE). She conducts research on and has written extensively about system safety, software safety, software and system engineering, and human-computer interaction.

[37] LEVESON, *supra* note 15, at 422. While Leveson envisages that information regarding implementation be provided separate from the policy itself, we are recommending that BSEE include strategies for implementation within the Policy.

[38] *See* Grenville, Nash, and Coglianese, *supra* note 15.

[39] THE BAKER REPORT, *supra* note 3, at 249.

[40] ELPC's work in establishing environmental performance indicators will include criteria for assessing company implementation of the Policy. This research is incorporated into the discussion of each characteristic.

performing or overseeing regulated activities."[41] This definition is too narrow. BSEE should encourage (even though it cannot require) operators to apply the Policy to regulated and unregulated activities. A culture of safety should be internalized by the organization and be applied to all areas of drilling operations, not just those directly regulated by BSEE.

 Leadership Safety Values and Actions. The Policy should provide specific examples of the types of actions a company should take to "demonstrate [its] commitment to safety."[42] For example, the Policy should require improved public disclosure of environmental protection information by oil and gas drillers and their contractors.[43] These disclosures fall into two categories. First, companies should disclose plans and policies they adopt to protect the environment from adverse impacts of their OCS operations.[44] Specifically, BSEE should require companies to make their Safety and Environmental Management Systems (SEMS) publicly available. Second, companies should disclose environmental and human safety performance data, including data on accidents and incidents, oil and chemical spills, near-miss events, and indicators of potential incidents (e.g., unexpected gas leaks).[45]

 Companies may also use means other than disclosure to demonstrate a commitment to safety, and BSEE should identify these additional strategies in the Policy. For example, companies might provide incentives to management by linking executive compensation to safety and environmental performance.[46]

 Problem Identification and Resolution. One key aspect of safety culture policy implementation is problem identification and resolution, and BSEE is correct to include it in the Policy. BSEE should provide further clarification, however, by identifying the specific actions and processes that create a strong system for identifying and resolving human and environmental

---

[41] The Policy at 75444.

[42] *Id.*

[43] CERES, SUSTAINABLE EXTRACTION? AN ANALYSIS OF SEC DISCLOSURE BY MAJOR OIL & GAS COMPANIES ON CLIMATE RISK & DEEPWATER DRILLING RISK I (2012) [hereinafter CERES REPORT]. This report evaluates the disclosure of environmental risks to the SEC by oil and gas companies and concludes that the majority of companies have poor disclosure of the risks associated with deepwater drilling and of the environmental performance data.

[44] *See* CERES REPORT, *supra* note 43, at 18.

[45] *See* James Reason, *Achieving a Safe Culture: Theory and Practice*, 12 WORK & STRESS 293, 294 (1998) ("In the absence of frequent bad events, the best way to induce and then sustain a state of intelligent and respectful wariness is to gather the right kinds of data. This means creating a safety information system that collects, analyses and disseminates information from incidents and near misses, as well as from regular proactive checks on the system's vital signs.").

[46] Nalini Govindarajulu and Bonnie F. Daily, *Motivating Employees for Environmental Improvement*, 104 INDUSTRIAL MANAGEMENT & DATA SYSTEMS 362, 368 (2004); *see* CERES REPORT, *supra* note 43, at 21; *see also* BP, ANNUAL REPORT AND FORM 20-F 2011, 146 (filed 2012), *available via* EDGAR online. BP noted in its 2011 Annual Report that annual and deferred bonuses for senior managers and executive directors are dependent upon performance standards. However, BP does not differentiate between worker safety and environmental safety in its discussion of how bonuses are connected to safety standards. BSEE should encourage companies that reward executives for meeting safety objectives to identify environmental performance standards.

safety concerns. Most importantly, companies' problem resolution processes can be improved through the development of stronger relationships and communication between corporate decision-makers and workers in the field who witness and respond to incidents.[47] In addition, field workers need the latitude to apply their judgment to stop work to prevent an incident. They also should be encouraged to identify ways of operating that reduce other adverse impacts on the environment, ranging from plans for responding to incidents to routine operations.

The process of problem identification and resolution is inextricably linked to several other characteristics of an effective safety culture identified by the Policy, including "Personal Accountability," "Environment for Raising Concerns," and "Effective Safety Communication."[48] Methods for incorporating environmental safety into these characteristics are discussed in their respective sections.

Personal Accountability.   For the Policy to be effective, BSEE must require that companies develop methods to ensure that each employee is aware of and works to implement the safety culture and achieve the company's environmental and safety performance goals. First, the Policy should require that companies "implement a written plan that describes clearly and succinctly process safety responsibilities and accountabilities for existing staff personnel," as well as responsibilities, accountabilities and goals for reducing other types of adverse environmental impacts resulting from the company's operations.[49] Employees should be aware of what constitutes a risk to people and the environment and how to report such risks.[50] For staff to be personally accountable they need to be equipped with the proper tools and training to execute their responsibilities,[51] and empowered to voice concerns about and suggest new ideas for protecting people and the environment.[52]

---

[47] *See* LEVESON, *supra* note 15, at 425 ("In many losses, there was evidence that a problem occurred in time to prevent the loss, but there was either no communication channel established for getting the information to those who could understand it and to those making decisions or, alternatively, the problem-reporting channel was ineffective or simply unused.").

[48] The Policy at 75444; *see also* Grenville, Nash, and Coglianese, *supra* note 15.

[49] THE BAKER REPORT, *supra* note 3, at 252. The Baker Report considers only occupational and process safety issues and does not address environmental protection. However, many of the recommendations for improving process safety can also be applied to issues of environmental safety and protection. *See also* Responsible Care, *Process Safety Code of Management Practices* (November 9, 2012) at 2.

[50] *See* GRAHAM DEEP WATER REPORT, *supra* note 11, at 90.

[51] Govindarajulu and Daily, *supra* note 46, at 366.

[52] *See* LEVESON, *supra* note 15, at 429. *See* THE BAKER REPORT, *supra* note 3, at 251 (recommending that companies include such responsibilities in contracts with employees and key their pay to compliance).

Work Processes.   It is not clear from the description of "work processes" in the Policy what steps a company should take to implement it. This factor should be clarified by providing clear guidelines. For example, does this factor require more than the implementation and maintenance of SEMS? At a minimum, there should be appropriate "bridging" documents to ensure all companies working together have coordinated safety systems.

Continuous Learning and Inquiring Attitude.   We recommend that BSEE either further distinguish between "continuous learning" and "inquiring attitude" or combine them into a single characteristic that emphasizes the importance of continuous re-evaluation and safety policy innovation.[53] The Policy should clarify how its evaluation will be related to SEMS auditing procedures, if at all.

Environment for Raising Concerns and Respectful Work Environment. The Policy should clearly define what it means to create an "environment for raising concerns" and provide guidelines for implementing this characteristic. This type of work environment includes not only a mechanism by which employees can raise ideas about and report environmental protection concerns, but also a company-wide attitude toward reporting of mishaps and risks.[54] The Policy should state that BSEE expects management to contribute to creating this type of environment, stressing that managers should be receptive to employee suggestions and concerns.[55] Employees must feel comfortable voicing ideas and suggestions as well as concerns.[56] However, in its current form, the characteristic provides insufficient guidance as to the range of concerns that should be reported by employees. It is important to ensure that employees report not only safety concerns and near-miss incidents, but also suggestions for minimizing other adverse impacts of the operation on the environment.[57] This reporting could be supported through the anonymity of a whistleblower protection policy.[58]

---

[53] Govindarajulu and Daily, *supra* note 46, at 369; TRB SPECIAL REPORT*, supra* note 9 (noting that "[p]eople in the organization must actually use the SEMS program and improve its implementation on a continuing basis.").

[54] *See* LEVESON, *supra* note 15, at 429.

[55] *See* Leveson, Nancy and Joel Cutcher-Gershenfeld, *What System Safety Engineering Can Learn from the Columbia Accident*, INT. CONFERENCE OF THE SYSTEM SAFETY SOCIETY 1, 5 (2004), *available at* http://sunnyday.mit.edu/papers/issc04-final.pdf.

[56] LEVESON, *supra* note 15, at 429.

[57] Reason, *supra* note 45, at 302.

[58] *See* TRB SPECIAL REPORT, *supra* note 9, at 8 (suggesting that "BSEE . . . establish a whistleblower program to help monitor the culture of safety that actually exists at each installation and to help uncover any improprieties in its own operations."); LEVESON, *supra* note 15, at 405 (noting that "[i]f reporting is considered to have negative consequences for the reporter, then anonymity may be necessary and a written policy provided for the use of such reporting systems, including the rights of such reporters and how the reported information will be used.").

__Effective Safety Communication.__   Management should communicate clearly and consistently that human safety and environmental protection are priorities. Communications from management should avoid sending "mixed messages for competing priorities."[59] The Policy should require that employees be "supported by management if they raise safety concerns" and should "eliminate barriers to dissenting opinions."[60] Giving employees the ability to contact management with concerns creates a two-way communication system that allows an exchange of information, encourages "continuous learning,"[61] and facilitates an "environment for raising concerns."[62] In addition to reporting concerns, actual incidents, and near misses, employees should be empowered to stop work if it threatens humans or the environment and to be ever on the alert for—and raise with management—opportunities to improve environmental performance and reduce the operation's adverse impacts on the environment. This reporting, too, should be incentivized, encouraged, and bred into the organizational culture.

> *BSEE Question 5: How well does the draft Safety Culture Policy Statement enhance organization's understanding of BSEE's expectations that they maintain a safety culture?*
>
> **Summary of ELPC Comment: In addition to providing specific recommendations for implementing the Policy, BSEE should also provide a detailed process for assessing the effectiveness of a company's implementation of the Policy.**

The Policy is successful in providing a high-level overview of BSEE's expectation that companies maintain a safety culture. Incorporating more specificity and guidance for companies, as recommended in our response to questions one and two, will enhance organizations' understanding of this expectation. The Policy could also more fully reflect BSEE's expectations by setting out requirements for periodic review of Policy implementation.[63] While BSEE notes that the safety culture characteristics "were not developed to be used for inspection purposes,"[64] it is essential that companies, BSEE, and the public have a mechanism for evaluating the effectiveness of implementation of the Policy. A recent report published by the Transportation Research Board developed recommendations for using the SEMS program to

---

[59] TRB SPECIAL REPORT, *supra* note 9, at 22.

[60] Leveson and Cutcher-Gershenfeld, *supra* note 55.

[61] The Policy at 75444.

[62] *Id*.

[63] *See* TRB SPECIAL REPORT, *supra* note 9, at 95; *see also* THE BAKER REPORT, *supra* note 3, at 249 (commenting, as part of one of its recommendations to BP, that the company "review the effectiveness of existing refinery-level process safety related policies, practices, and procedures that have a significant potential to affect BP stakeholders and develop and implement new refinery level process safety goals, policies, practices, and procedures that take into account stakeholder interests and input").

[64] The Policy at 75444.

facilitate changes in organizational culture. The report suggests that SEMS reviews should "emphasize[] the evaluation of attitudes and actions rather than documentation and paperwork."[65] Likewise, BSEE should use "[a] holistic combination of methods in evaluating implementation and effectiveness of the Policy.[66] Additionally, BSEE can ensure that ongoing expectations are met by requiring that companies implement the Policy as a "dynamic process that evolves with time," and is continually updated and improved.[67]

Operationally, BSEE could combine its review of a company's SEMS with its review of that company's implementation of the Policy. In monitoring SEMS, BSEE requires operators to keep records and make them available to BSEE.[68] For example, operators must submit a copy of Form BSEE-131 (formerly MMS-131, as it is named in the SEMS regulation) annually, which documents: the number of injuries that its employees or contractors sustained; employee hours worked (to calculate injury time as a percentage of total time worked); number of NPDES violations; and the number and total volume of oil spills less than 1 bbl, on a quarterly basis.[69] While this is useful information, it does not provide a strong basis for assessing the company's culture of safety and environmental protection. BSEE has the authority to require, in addition, descriptions of incidents and near-miss incidents, the underlying causes and remedial action taken, and identification of company mechanisms that empower and encourage management and employees to improve environmental protection and reduce adverse environmental impacts of the operations.[70] BSEE should also expand the information collected during a SEMS audit to include stop-work information, which will allow BSEE to evaluate company responses to latent safety concerns. Companies should collect information about the backlog of equipment updates and maintenance, including the length of the backlog and the average time it takes for a company to address a problem identified during an audit.[71]

---

[65] TRB SPECIAL REPORT, *supra* note 9, at 89-90.

[66] *Id.* at 91.

[67] *Id.* at 90.

[68] Oil Gas and Sulphur Operations in the Outer Continental Shelf – Safety and Environmental Management Systems, 75 Fed.Reg. 63610, 63611 (October 15, 2010).

[69] *Id*. at 63635-6.

[70] See, e.g., 30 C.F.R. § 250.1924 and § 250.1928.

[71] *See* LEVESON, *supra* note 15, at 440. In a list of actions a company should take in creating a safety system, Leveson states that companies should "[p]rioritize maintenance for identified safety-critical items" and "[e]nforce maintenance schedules."

BSEE Question 6: In addition to issuing a Safety Culture Policy Statement, what might BSEE consider doing, or doing differently, to increase OCS attention to safety culture?

BSEE Question 7: How can BSEE better involve stakeholders to address safety culture?

Summary of ELPC Comment: BSEE should require more disclosure of environmental data and risks associated with drilling on the OCS, more transparency about companies' SEMS and safety cultures, and more stakeholder involvement. BSEE should also assist with the collection, dissemination and sharing of best practice information.

The Policy is a positive first step towards developing an effective human and environmental safety culture. However, the Policy in isolation will not achieve BSEE's stated goals. The Policy must be bolstered by other regulatory and non-regulatory measures. Four key areas that BSEE should focus on are: urging the SEC to adopt more stringent requirements for disclosures of environmental risk and performance;[72] better company data collection and more public information dissemination;[73] whistleblower protections;[74] and strategic stakeholder engagement.[75]

Currently, the SEC requires companies to disclose information needed by investors to meaningfully evaluate material risks, including environmental health and safety risks.[76] An analysis conducted by Ceres of SEC disclosures by major oil and gas companies on climate risk and deepwater drilling risk found that companies are "failing to adequately disclose their substantial material risks in those areas" and that "disclosure has a long way to go."[77] Most SEC disclosures do not contain sufficient information for BSEE or other interested stakeholders to assess whether a company's SEMS is effective, whether it has a safety culture, or whether the safety culture prioritizes or even embraces environmental protection. Most disclosures offer a high-level narrative about environmental risks with few specific examples or supporting data. For example, Shell's 20-F disclosure from 2011 includes a short description of measures used to improve safety culture and reinforce safety of operating practices following the BP Deepwater Horizon oil spill.[78] Shell concedes that despite work to minimize the likelihood of incidents,

---

[72] *See* CERES REPORT, *supra* note 43.

[73] *Id.*

[74] *See* TRB SPECIAL REPORT, *supra* note 9, at 8.

[75] *See* THE BAKER REPORT, *supra* note 3, at 247.

[76] CERES REPORT, *supra* note 43, at 5-6.

[77] *Id.* at I, 6, 11-21.

[78] ROYAL DUTCH SHELL REPORT, *supra* note 12, at 50.

they do still occur.[79] However, the report does not include a list of the safety incidents that have occurred or the response action taken.[80] Similarly, Apache provides a broad overview of "oil spill response plans," but does not provide descriptions of incidents, the underlying causes, or remedial actions.[81]

BSEE should encourage the SEC to expand the reporting requirements and, in addition, BSEE should enhance its own data collection to help fill the disclosure gaps. The most efficient way to assess whether a company maintains a culture that genuinely empowers employees to voice concerns and suggest ideas is to survey employees.[82] Periodic anonymous surveys or interviews of employees would enable BSEE to assess a company's organizational culture and its effectiveness.

BSEE correctly acknowledges that personal accountability is essential to protect safety and the environment. Notably, this accountability can be facilitated and enhanced through effective engagement of employees and contractors.[83] In 1997, the United Kingdom Oil and Gas industry trade associations developed the 'Step Change in Safety' partnership with the aim of reducing the offshore oil and gas industry injury rate by 50%.[84] The Step Change partnership is analogous to SEMS and the Policy; however, the partnership is more well-developed, having been implemented over a decade ago. One challenge faced by the UK has been the gulf between the adoption of the official Step Change process and workforce engagement in safety culture.[85] The partnership has made a concerted effort to build a structure of networks and forums to communicate the Step Change guidance, standards and best practice to the workforce.[86] This

---

[79] *Id*.

[80] *Id*.

[81] APACHE, FORM 10-K, 18 (June 30, 2012), *available via* EDGAR online.

[82] *See* THE BAKER REPORT, *supra* note 3, at 250 (recommending that BP "measure the effectiveness of this effort to improve process safety culture by conducting periodically an anonymous process safety culture survey among the U.S. refineries").

[83] *See* THE BAKER REPORT, *supra* note 3, at 247 (commenting, as part of one of its recommendations to BP, that "BP's effort to develop and implement a system to ensure process safety knowledge and expertise will benefit greatly from the input of various stakeholders, including employee representatives and contractors. Those stakeholders should be involved in developing, reviewing, and implementing such a system. BP should also seek input and advice from external groups with appropriate process safety expertise to help design, develop, and implement this system.").

[84] Step Change in Safety, *About Step Change,* http://www.stepchangeinsafety.net/about/workgroups/workforce-engagement.cfm (last visited March 13, 2013).

[85] Step Change in Safety, *Workforce Engagement: A Practical Guide* 11 (2012), *available at* http://www.stepchangeinsafety.net/about/workgroups/WorkforceEngagementToolkit.cfm.

[86] Step Change in Safety, *A Guide to Step Change in Safety*: *What You Need to Know* http://www.stepchangeinsafety.net/knowledgecentre/publications/publication.cfm/publicationid/63 (last visited March 13, 2013).

echoes Leveson's observation that safety culture must strive to avoid a "paperwork culture" in which companies adopt the Policy but do not meaningfully implement it.[87] The Step Change partnership currently provides practical guidance on how to run a workforce engagement survey at the worksite, how to use the results, and how to improve the organizational culture.[88] The rationale for the surveys is that "results are a key leading indicator to help worksites measure and benchmark their workforce engagement against an industry average and identify good practices and areas for improvement."[89] The Step Change partnership provides an instructive model that BSEE could harness to encourage companies to collect meaningful information from their employees and contractors.

In addition to the Step Change partnership, there is an emerging international body of regulations and best practices relating to human and environmental protection in drilling operations. For example, the UK Department of Energy & Climate Change has established the Oil Spill Prevention and Response Advisory Group to review UK continental shelf regulations and arrangements for pollution prevention and response.[90] The Group includes a diverse membership—offshore operators, drilling contractors, offshore trade unions, industry groups, and government.[91] In September 2011, the Group issued a final report called "Strengthening UK Prevention and Response," which includes findings and recommendations that are indicative of best practices.[92] BSEE should draw on these resources and facilitate the sharing of best practice information among stakeholders.

---

[87] LEVESON, *supra* note 15, at 429; *see also* THE BAKER REPORT, *supra* note 3, at 244 (recommending that management "demonstrate their commitment to process safety by articulating a clear message on the importance of process safety and matching that message both with the policies they adopt and the actions they take.").

[88] Step Change in Safety, *Achievements and Current Work,* http://www.stepchangeinsafety.net/about/workgroups/Achievementsandcurrentwork.cfm (last visited March 13, 2013).

[89] *Id*.

[90] Oil and Gas UK, *OSPRAG Key Issues*, http://www.oilandgasuk.co.uk/knowledgecentre/Key_issues.cfm (last visited March 13, 2013).

[91] *See* Oil and Gas UK, *OSPRAG Participants and Meetings*, http://www.oilandgasuk.co.uk/knowledgecentre/Participants_Meetings.cfm (last visited March 13, 2013).

[92] FINAL REPORT OF THE UK OIL SPILL PREVENTION AND RESPONSE ADVISORY GROUP, STRENGTHENING UK PREVENTION AND RESPONSE (2011).

Conclusion

ELPC appreciates the opportunity to comment on the Policy. A strong safety culture policy that recognizes the importance of both human and environmental health and safety, and that encourages companies and their contractors to incorporate environmental protection into their safety policies is much needed.

Respectfully Submitted,

Wendy B. Jacobs
Clinical Professor and Director
wjacobs@law.harvard.edu
617.496.3368

Elisabeth Costa
Clinical Student
ecosta@llm13.law.harvard.edu

Jocelyn Sedlet
Clinical Student
jsedlet@jd14.law.harvard.edu