Canada Energy Regulator   Régie de l'énergie
Regulator   du Canada

Canada Energy Regulator Safety Culture Work Plan

2020 - 2023

Canada

Introduction

In 2010, 3 major catastrophic events occurred in the North American oil and gas industry over a 5-month period. On April 20, 2010, an offshore well blowout occurred in the Gulf of Mexico (Deepwater Horizon). About three months later, on July 25, 2010, a pipe segment ruptured and released an estimated 20,082 barrels of crude oil in Michigan (Kalamazoo River oil spill). Less than two months later, on September 9, 2010, a natural gas transmission pipeline ruptured in a residential area of San Bruno, California. These three events caused serious environmental damage. The cost of cleanup and recovery was in the billions of dollars. In the Deepwater Horizon accident, 11 workers died and 17 were injured. As a result of the San Bruno accident, 8 members of the public died, 58 were injured, over 100 families had their property destroyed or damaged.

These events not only changed the oil and gas industry, but also shaped the evolution of the Canada Energy Regulator's (CER's) safety and environment oversight. With the release of the investigation reports into these events and growing evidence that safety culture often contributes to high consequence events, the CER increased its efforts to raise awareness and promote a positive safety culture across the oil and gas industry.

Major Activities and Accomplishments

Highlights of the CER's safety culture work to date includes:

- the establishment of the North American Regulators Working Group on Safety Culture to facilitate collaboration and shared learning on regulatory best practices for influencing a positive safety culture across regulated industries;
- the release of the Statement on Safety Culture[1];
- development and piloting of a suite of safety culture indicators; and
- facilitating workshops with our largest regulated companies to promote learning and sharing.

The CER's most significant accomplishment in this area has been the release of the Statement of Safety Culture. The statement not only describes the CER's expectation that companies build and sustain a positive safety culture, but it also provides a framework for describing safety culture. This framework has been used by regulated companies to establish company-specific safety culture frameworks and programs and it is commonly referred to in presentations by members of industry and academia.

The safety culture framework has also provided a mechanism to have consistent and structured dialogue about safety culture with our regulated companies. To date, much of this dialogue has been with our larger companies and we have seen greater focus and efforts related to safety culture from many of them.

Looking Ahead

To continue to advance safety culture across the industry, the CER will:

- > build on the past success of the safety culture framework by developing additional guidance and tools for industry to use;
- > take a risk-informed approach to outreach activities with our regulated companies to promote and advance safety culture;
- > facilitate industry-wide continual learning and improvement by bringing together different parts of the larger oil and gas system including industry, regulators, and academia to share and collaborate on best practices for advancing safety culture; and
- > develop enhanced, risk-informed analytics that identify human and organizational factors that support effective risk management and safety culture maturity.

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1. The Statement on Safety Culture was jointly released by the CER, the Canada Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) and the Canada Nova Scotia Offshore Petroleum Board (CNSOPB)

Goals

The CER's safety culture work is one aspect of our broader safety and environment oversight strategy for preventing harm to people and the environment.

To support the strategy, the following two safety culture goals were established:

SYSTEM-WIDE INFLUENCE	HOLISTIC COMPANY PERFORMANCE
The CER will take a system-wide approach to influencing a positive safety culture that supports effective management of threats to people and the environment across the industry.	The CER will enhance the understanding and detection of underlying human and organizational factors to support effective risk management and safety culture maturity.

These goals reflect a balanced approach to fostering system and company-specific advancements in safety and environmental protection by:

Embracing an understanding that the CER is part of the larger oil and gas safety system. To improve that system, we must work collectively with other members in the system and share, learn, and leverage the experiences of others.

Enhancing the ability of regulated companies to detect threats to human and organizational factors to address systemic safety and environmental performance issues while also strengthening their safety culture maturity.

Overview Of Goals, Strategies, And Outcomes

	System-wide influence	Holistic company performance
Goal (where we want to go)	The CER will take a system-wide approach to influencing a positive safety culture that supports effective management of threats to people and the environment across the industry.	The CER will enhance the understanding and detection of underlying human and organizational factors to support effective risk management and safety culture maturity.
Strategy (how we will accomplish goal)	The CER will take a risk-informed approach to developing: • collaboration opportunities with various parts of the oil and gas safety system and other high-hazard industries; and • safety culture guidance and tools that support the advancement of safety culture.	Conduct risk-informed outreach activities with companies to promote safety culture maturity through deeper level of analysis and understanding of threats to human and organizational factors.
Outcome (what we want to achieve)	1. Members of the oil and gas system are aware and incorporate learnings and best practices from other members of the oil and gas safety system and other high-hazard industries. 2. CER-produced safety culture guidance and tools are valuable and support safety culture advancement across industry.	Regulated companies evaluate and address underlying human and organizational factors in order to effectively manage risk and develop a mature safety culture.