



U. S. Chemical Safety and Hazard Investigation Board

RECOMMENDATION STATUS CHANGE

SUMMARY

Report:	Macondo Blowout and Explosion
Recommendation Number:	2010-10-I-OS-R3
Date Issued:	June 5, 2014
Recipient:	American Petroleum Institute (API)
New Status:	Closed – Acceptable Alternative Action
Date of Status Change:	June 18, 2025

Recommendation Text:

Publish an offshore exploration and production safety standard for the identification and effective management of safety critical elements (SCEs)— technical, operational, and organizational— with the goal of reducing major accident risk to As Low As Reasonably Practicable (ALARP), including but not limited to:

- a. development and implementation of a SCE management system that includes the minimum necessary “shall” requirements in the standard to establish and maintain effective safety barriers to prevent major accidents;*
- b. methodologies for (1) the identification of SCEs and (2) the development of performance standards of each SCE, including its functionality, availability, reliability, survivability, and interactions with other systems;*
- c. establishment of assurance schemes for continuous active monitoring of all identified SCEs throughout each SCE’s lifecycle;*
- d. fulfillment of independent verification requirements and use of those verification activities to demonstrate robustness of the SCE management process;*
- e. development of process safety key performance indicators pertaining to the effective management of SCEs to drive continuous improvement.*

Board Status Change Decision:

A. Rationale for Recommendation

On April 20, 2010, a multiple-fatality incident occurred at the Macondo oil well approximately 50 miles off the coast of Louisiana in the Gulf of Mexico during temporary well-abandonment activities on the Deepwater Horizon (DWH) drilling rig. Control of the well was lost, resulting in a blowout; the uncontrolled release of oil and gas (hydrocarbons) from the well. On the rig, the hydrocarbons found an ignition source. The resulting explosions and fire led to the deaths of 11

individuals; serious physical injuries to 17 others¹; the evacuation of 115 individuals from the rig; the sinking of the Deepwater Horizon; and massive marine and coastal damage from approximately 4 million barrels of released hydrocarbons.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) investigated the incident and produced a four-volume investigation report and issued 16 recommendations; three of those recommendations were issued to the American Petroleum Institute (API). As part of the investigation, the CSB looked at consensus standards and the role they play in offshore safety. This status change summary addresses CSB Recommendation No. 2010-10-I-OS-R3.

B. Response to the Recommendation

API published the 4th Edition of API RP 75 *Recommended Practice for a Safety and Environmental Management System for Offshore Operations and Assets* (API RP 75). This updated publication contains considerable requirements which implement the recommendation. Though API RP 75 does not use the terminology specified by the recommendation, its requirements capture the lessons learned from the Macondo incident and translate those lessons into actionable requirements and guidance which, if followed, should prevent future incidents or at least mitigate their consequences.

In addition to the considerable update to API RP 75, API also founded the Center for Offshore Safety (COS)² following the Macondo incident. The work of COS is based upon the material contained within API RP 75. COS provides accredited audit service providers authorization to conduct audits and issue certificates, issues guidance on matter such as SEMS maturity self-assessments, interfaces, and other topics, and collects and publicly disseminates information from high value incidents and safety performance indicators from industry for everyone's benefit. The work of COS in improving offshore safety cannot be understated.

C. Board Analysis and Decision

Based upon the information above, the Board concurs that API has implemented acceptable alternatives to the original recommendation language that meet the objectives or a majority of the objectives envisioned by the Board. As such, the Board the Board voted to change CSB Recommendation No. 2010-10-I-OS-R3 to: "Closed – Acceptable Alternative Action."

¹ The injury numbers presented here match those reported to the US Coast Guard as required by 33 C.F.R. § 146.30 on form CG-2692 Report of Marine Accident, Injury or Death. The 17 physical injuries represented here reflect the individuals that received immediate hospitalization as a result of the incident. The actual number of injured from the Macondo incident is somewhat ambiguous, as a number of additional individuals sought medical treatments in the weeks following the blowout. In December 2014, Transocean noted 63 bodily injury claims pending in the state and federal courts in Louisiana and Texas.

² <https://www.centerforoffshoresafety.org/>