Board: Oil drilling risks remain from device woes (Update)

June 5 2014, by Seth Borenstein

In this image taken from video provided by BP PLC at 12:23 a.m. EDT, Saturday Sept. 4, 2010 Aug. 3, 2010 shows the blowout preventer that failed to stop oil from spewing into the Gulf of Mexico being raised to the surface. The last-ditch safety device that didn't stop the 2010 BP oil spill had multiple failures, wasn't tested properly, and still poses a risk for many rigs drilling today, another federal investigation board concludes. The report issued Thursday by the U.S. Chemical Safety Board zeroes in on what went wrong with the blowout preventer and blames bad management and operations. They found two different sets of wrong wiring, a dead battery and a bent pipe in the hulking failsafe device. And that they said led to the dumping of 172 million gallons of oil into

the Gulf of Mexico. (AP Photo/BP PLC)

The key last-ditch safety device that failed to prevent the 2010 BP oil spill remains a potentially catastrophic problem today for some offshore drilling, according to a U.S. U.S. safety board investigation.

The report issued Thursday by the U.S. Chemical Safety Board details the multiple failures and improper testing of the blowout preventer and blames bad management and operations for the breakdown. They found faulty wiring, a dead battery and a bent pipe in the hulking device.

"The problems with this blowout preventer were worse than we understood," safety board managing director Daniel Horowitz said in an interview. "And there are still hazards out there that need to be improved if we are to prevent this from happening again."

The safety board, like the National Transportation Safety Board, can investigate but has no regulatory power. It recommended new safety standards and regulations in its report.

If the offshore oil drilling industry doesn't adopt them and regulators don't tighten up oversight of these devices, it "opens the possibility of another catastrophic accident," lead investigator Cheryl MacKenzie said at a news conference Thursday.

But investigators also noted that the industry is working on new designs that could fix many of the problems the safety board outlined. And the American Petroleum Institute issued a statement saying the report "ignores the tremendous strides made to enhance the safety of offshore operations."

The nation's worst offshore oil spill followed an explosion that killed 11 workers at the Deepwater Horizon drilling rig, about 50 miles (80 kilometers) off the Louisiana coast. The blowout preventer anchored to the top of the underwater well should have stopped the leak.

In such emergencies, the device uses multiple mechanisms—including clamps and quick-release blades—to try to choke off the oil flowing up from a pipe and disconnect the rig from the well. It can operate automatically when pressure or electricity is cut off or manually.

This aerial April 21,2010 file photo, taken in the Gulf of Mexico, more than 50 miles southeast of Venice on Louisiana's tip, shows an oil slick is seen as the Deepwater Horizon oil rig burns. The last-ditch safety device that didn't stop the 2010 BP oil spill had multiple failures, wasn't tested properly, and still poses a risk for many rigs drilling today, another federal investigation board concludes. The report issued Thursday by the U.S. Chemical Safety Board zeroes in on what went wrong with the blowout preventer and blames bad management and

operations. They found two different sets of wrong wiring, a dead battery and a bent pipe in the hulking failsafe device. And that they said led to the dumping of 172 million gallons of oil into the Gulf of Mexico. (AP Photo/Gerald Herbert, File)

The one that failed was 9 years old, nearly 57 feet tall and weighed about 400 tons. After it broke down, an estimated 172 million gallons (561 million liters) of oil spewed into the Gulf for 87 days.

Robert Bea, a professor of engineering and expert in oil pipelines at the University of California Berkeley, praised the report and said blowout preventers are like cruise ship lifeboats, used only in last resort but crucial. In this case, and potentially in some others still out there, a blowout preventer may be "deeply flawed" or full of holes, said Bea, who was not involved in the new study.

Various investigations have found that the cause of the initial explosion involved multiple screw-ups with cement, drilling mud, fluid pressure, botched tests, management problems and poor decisions. The blowout preventer sealed the well temporarily, but then it failed and that caused the massive spill, the new 166-page report found.

The report faulted well owner BP and rig operator Transocean. The problem, said safety board investigator Mary Beth Mulcahy, was that they didn't test the blowout preventer's individual safety systems but the device as a whole. It turned out there were two sets of faulty wiring that caused problems and a dead battery.

Mulcahy said the companies were following a testing standard set by the industry, not the individual testing suggested by the manufacturer.

The safety board also found that the drill pipe in the mechanism bent far earlier in the accident and from a different cause than determined by a presidential oil spill commission. It is the type of bending that could happen even if operators are doing everything right, Mulcahy said.

The board said the same device design is being used on at least 30 rigs worldwide and some general problems with operations and testing could affect other types of preventers.

Donald Boesch, a University of Maryland professor who was on the presidential oil spill commission, agreed with the latest investigation. He said the chemical safety board was able to do what his board didn't do, a hands-on testing of the device.

The two companies involved in rig operations blamed each other. BP spokesman Geoff Morrell said all of the evidence "demonstrates that Transocean owned the rig's blowout preventer and was responsible for its maintenance."

Transocean spokesman Brian Kennedy noted that BP pleaded guilty to 12 felony counts from the accident while Transocean did to only one misdemeanor violation of the Clean Water Act.

Kennedy also said the blowout preventer "had been tested successfully in accordance with regulatory requirements and activated as intended at the time of the incident, but was unable to seal the well because immense pressure buckled the drill pipe."

Transocean was fined $1.4 billion while BP was fined $1.3 billion and ordered to pay an additional $2.6 billion for environmental and research work

More information: Chemical Safety Board: www.csb.gov/

© 2014 The Associated Press. All rights reserved.

Citation: Board: Oil drilling risks remain from device woes (Update) (2014, June 5) retrieved 25 April 2024 from https://phys.org/news/2014-06-safety-board-faults-key-device.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.