Safety Equipment Failures Show Lack of Regulation

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This image from a video released by BP PLC shows oil spewing from a yellowish, broken pipe 5,000 feet below the surface. The oil looks like steam rushing from a geyser. The video released Wednesday May 12, 2010 gives a not-yet-seen glimpse of the leaking well a mile underwater. The stream occasionally can be seen becoming lighter as natural gas mixes into the gusher. (AP Photo/BP PLC) No Sales

WASHINGTON (AP) — The first firm evidence of what likely caused the disastrous Gulf of Mexico oil blowout — a devastating sequence of equipment failures — drives home a central unsettling point about the U.S. oil industry: key safety features at tens of thousands of U.S. offshore rigs are barely regulated.

Wednesday's hearings by congressional and administration panels — in Washington and in the state of Louisiana — laid out a checklist of unseen breakdowns on largely unregulated aspects of well safety that appear to have contributed to the April 20 blowout: a leaky cement job, a loose hydraulic fitting, a dead battery.

The trail of problems highlights the reality that, even as the U.S. does more deepwater offshore drilling in a quest for domestic oil, some key safety components are left almost entirely to the discretion of the companies doing the work.

It remains unclear what, if anything, Congress or the Obama administration may do to address these regulatory deficiencies.

So far, Interior Secretary Ken Salazar has proposed splitting his department's Minerals Management Service in two to make safety enforcement independent of the agency's other main function — collecting billions in royalties from the drilling industry.

But the events that unfolded in the hours before the blowout on the Deepwater Horizon rig suggest that much more will ultimately need to be done on the regulatory front.

As the day of the catastrophe got under way on the drilling platform 48 miles (77 kilometers) off Louisiana, workers were stabilizing the mile-deep exploratory well to mothball until production.

Shortly after midnight, nearly 22 hours before the explosion, contractor Halliburton finished pumping cement into the well. Heavy cement is used to fill gaps around the drill piping and block any surge of natural gas or oil.

As part of the planned routine, the workers next capped the drill pipe with the first of multiple cement plugs. The plugs are meant to stop any upsurge of gas or oil inside the piping.

The cement and metal casing along well walls were then checked. Positive pressure tests indicated they were sound.

But there are no federal standards for the makeup of the crucial cement filler, MMS spokesman David Smith confirmed Wednesday. Government and industry have been working to publish new guidelines later this year, but they will be recommendations, not mandates.

The well's owner, global oil company BP PLC, said Thursday its costs for trying to stop the gusher, containing the spill and helping Gulf states foot the response tab totaled $450 million, up $100 million since its May 10 update to securities regulators. BP Chief Operating Officer Doug Suttles said Wednesday the bill increases by at least $10 million a day.

After visiting BP's offices in Houston, where engineers are working on ways to plug the gusher, Energy Secretary Steven Chu said Wednesday he felt more confident they would be able to combat the problem. "Progress is being made," Chu said.

Also Wednesday, a group of Louisiana crab fishermen claimed in a lawsuit that Halliburton — with permission from BP and rig owner Transocean — used a new quick-curing cement mix with nitrogen. It supposedly generates more heat than

other recipes and could allow dangerous bursts of methane gas to escape up the well.

According to the testimony and other evidence that has emerged this week, the first sign of trouble came shortly before dawn. Workers pumped out heavy drilling fluid for a negative pressure test to make sure underground gas could not seep into the well. That test failed: it meant the well might be leaking. Another test was run. It too failed.

Workers debated what to do next. They eventually decided to resume work.

Further reducing protection from a blowout, heavy drilling fluid was pumped out of a pipe rising to the surface from the wellhead. It was replaced with lighter seawater in preparation for placing the last cement plug.

Federal rules say an operator must hold newly cemented well-wall casing under pressure for up to 12 hours before resuming drilling. Other than that, there are few rules about how long to let cement set.

Whatever the main cause — cement or something else — the last plug was still missing just before 10 p.m. on the 20th, when drilling fluid pushed by underground gas started kicking up uncontrollably through the well.

Desperate rig workers tried to activate a set of hydraulic cutoff valves known as a blowout preventer to squeeze off the surge. However, hydraulic fluid was leaking from a loose fitting in the preventer's emergency system, making it harder to activate powerful shear rams to cut the piping and cap the blowout. Also, a battery had gone dead in at least one of two control pods meant to automatically switch on the preventer in an emergency.

The preventer "was to be the fail-safe in case of an accident," Lamar McKay, the president of BP America, said at the House hearing.

Yet industry officials acknowledged a fistful of regulatory and operational gaps: There is no government standard for design or installation of blowout preventers. The federal government doesn't routinely inspect them before they are installed. Their emergency systems usually go untested once they are set on the seafloor at the mouth of the well. The federal government doesn't require a backup.

In one telling exchange Wednesday at a hearing of the Coast Guard and MMS in Kenner, Louisiana, Coast Guard Capt. Hung Nguyen asked a regional supervisor of the federal regulatory agency a question about blowout preventers: "It's my understanding that it's designed to industry standard and it's manufactured by the industry, installed by the industry, with no government witnessing or oversight of the construction or installation. Is that correct?"

"That is correct," replied Michael Saucier, the MMS field supervisor for the Gulf.

As gas pushed upward on the Deepwater Horizon, it suddenly ignited from an

unknown source and turned the platform into an enormous fireball. Eleven people were killed.

In the following days, workers kept trying to force the blowout preventer to close — without success.

Maddeningly, they lost a day trying to close a ram without realizing it had been replaced by a useless test part.

The unrelenting gusher of oil is now threatening wetlands, wildlife, the fishing industry and tourism.

Sometimes finger pointing at each other, officials from several of the companies involved said at Wednesday's hearings that it's not yet clear what precisely triggered the accident.

On Wednesday, BP was left still considering two ways to stem the stubborn blowout that has spewed more than 4 million gallons of oil into the Gulf. One was a pipe linked to the end of the gushing tubing. The other was a box to cover the leak and siphon the oil to a ship. As a backstop, a relief well is being drilled, but its completion is months away.

Adding urgency, thick, glossy tar balls turned up farther west and east than before: on a barrier island southwest of New Orleans and on an Alabama beach near Florida.

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