BP EXPLOSION UNDER SCRUTINY

Many companies tolerate risky practices that may lead to DEADLY ACCIDENTS, chemical safety board says

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A CRISIS IN “corporate cultural behavior” created conditions that led to the deaths of 15 workers and injuries to 180 more at BP’s Texas City, Texas, refinery, says the head of the Chemical Safety & Hazard Investigation Board (CSB), Carolyn W. Merritt. Merritt points to a history of corporate cost cutting that resulted in maintenance, safety, and plant infrastructure deterioration.

“The experience at BP should serve as a cautionary tale to every oil and chemical company,” says Merritt. “The problems at BP are not unique to one refinery, one division, or one corporation.”

She points to a growing acceptance of high-risk industrial operations by U.S. corporations. She warns that this behavior is establishing a dangerous pattern throughout industry.

At BP, company spokesman Neil Chapman, says: “There was a culture where people at the refinery accepted higher levels of risk than they should have, and there was no feedback loop from past incidents. There was an acceptance of people not following the correct procedures that were laid down.

“We agree that the explosion and fire was a preventable tragedy,” he continues. “We are deeply sorry for what occurred and for the suffering, and we are working to make the future far more secure for the families of those who died.”

BP has set aside $1.6 billion to settle more than 1,000 claims against the company. Chapman says the firm has reached settlements with all family members of deceased workers except one. That trial is set to begin this month.

The deadly accident that is drawing CSB’s concern took place on March 23, 2005, when BP started up the refinery’s octane-boosting isomerization unit. Refinery workers inadvertently overfilled a distillation tower and blowdown drum with highly flammable hydrocarbons. The overfilling caused the distillation tower to overpressurize and forced the opening of three emergency relief valves that vented to the old, undersized blowdown drum.

The drum, intended to capture excess hydrocarbons, quickly reached capacity and had no safety system to address excess filling, despite the fact that BP had 58 different relief valves venting to the same antiquated blowdown drum, CSB said in a statement.

A GEYSER of hydrocarbons blasted to the air, was ignited, and exploded, killing and injuring workers who were housed in several office trailers that had been tempo-

rarily located in the midst of the refinery.

On eight previous occasions between 1994 and 2004, the same blowdown drum had released hydrocarbons to the environment. Two releases caught fire. Plant procedures in place since 1977 stated that the firm’s blowdown drums should have been replaced with more advanced systems, CSB says.

Amoco, which owned the refinery and merged with BP in 1998, had been cited by the Occupational Safety & Health Administration in 1992 for operating an unsafe blowdown drum at the plant. However, the company dodged the citation by successfully arguing to OSHA that the drum was sufficient. It justified its position by pointing to an industry practice guideline prepared by the American Petroleum Institute (API), a trade association.

CSB is now urging API to drop or rewrite the guideline and OSHA to initiate a national program to eliminate the use of such blowdown drums. CSB wants these systems to be replaced with what it calls “inherently safer alternatives,” such as systems that capture and flare excess hydrocarbons in emergency situations.

Merritt called the BP accident a “perfect storm” in which aging infrastructure, overzealous cost cutting, inadequate design, and risk blindness all converged. The result, she says, “is the worst workplace accident in more than a decade.”

But she adds, “No company should believe it is immune to what happened to BP.”

Merritt travels the country making frequent speeches to corporations describing what she has learned through CSB’s investigations, she tells C&EN.

“I’ve probably given this speech hundreds of times, and invariably, someone will hear it and come up to me and say, ‘You’ve got to come to our company and give this presentation.’

“This is all about the-commonality of the accidents we have investigated and the commonality of the corporate culture,” Merritt says.