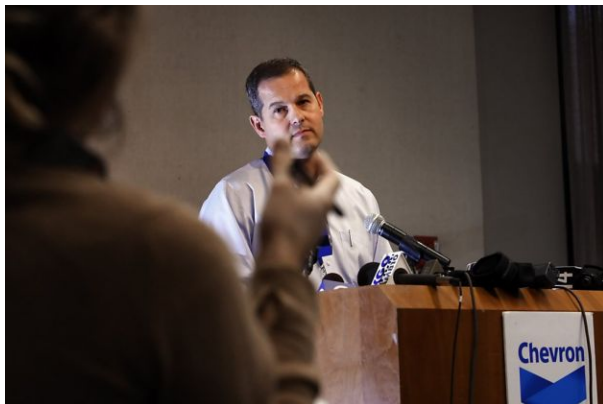


Chevron says pipe low on key protectant

Jaxon Van Derbeken

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Richmond Chevron refinery Managing Director Nigel Hearne says a bulletin will be issued nationwide on low-silicon pipes. Photo: Carlos Avila Gonzalez, The Chronicle / SF

The pipe that failed at Chevron's Richmond refinery last month had an abnormally low level of a key protective ingredient, leaving it vulnerable to corrosion caused by the sulfur and high temperatures in crude oil, a refinery official said Monday.

When the 40-year-old pipe failed Aug. 6, it spewed hydrocarbon vapor that ignited, destroying part of the refinery and sending a cloud of black smoke over Richmond and nearby communities.

[Nigel Hearne](#), managing director of the refinery, said at a news conference at the plant that the pipe had a lower-than-normal level of protective silicon in its steel, allowing the heat and sulfur in the oil to eat away at it.

He said that although experts at the refinery had known of the phenomenon, "it does not appear ... that this was effectively understood and acted upon."

Chevron has already admitted that it missed a chance to detect the badly corroded section of pipe in November, when other portions of the 200-foot-long line were checked.

Stressing vulnerability

Hearne said the 5-foot portion of the pipe where the rupture occurred was not examined when the rest of the line was. The inspection did uncover corrosion on a nearby pipe that prompted Chevron to replace it.

He said the company plans to issue a bulletin to refiners nationwide in coming days to stress the vulnerability of low-silicon steel pipes to corrosion.

Federal investigators looking into the cause of the blaze said late Monday they have not made a determination on the matter.

They have said the 8-inch-diameter line that leaked flammable hydrocarbon vapor had lost 80 percent of its wall thickness, leaving only 1/16th of an inch, by the time the fire broke out. Chevron's policy is to replace pipe if 50 percent of its thickness has been lost, say investigators with the federal [Chemical Safety Board](#).

The fire occurred two hours after Chevron decided to leave the crude-oil processing unit in operation while it assessed what officials believed to be a small leak in the pipe.

But after a flash fire was put out, the line suddenly broke open and spewed a cloud of hydrocarbon vapor that rapidly ignited, triggering a second blaze that burned for several hours. As many as 20 workers were engulfed by the vapor and narrowly escaped being caught in the fireball.

More than 15,000 people sought medical attention after the fire because of the smoke that blew through their neighborhoods.

Greg Karras, a senior scientist with Communities for a Better Environment, welcomed Chevron's warning to other oil companies about the dangers to their pipes and noted the role that sulfur may have played in the destruction of the Richmond line.

Pollution complaints

The group and other environmentalists have complained about pollution from the refining of crude with higher sulfur content, which typically comes from the Middle East. So-called sweet crude, such as oil extracted in Alaska, has lower sulfur content.

"If Chevron is warning the industry about dirtier crude, we are glad they are joining us in doing that," Karras said.

He said that refineries need to upgrade pipes and other equipment to ward off corrosion, as well as step up inspection and replacement programs.

"If they had done that, they would have replaced the pipe last November," Karras said.

Chevron's Hearne also addressed a story in The Chronicle on Sunday that revealed the company is the target of a federal criminal probe into whether it violated a court order to minimize flaring, the burning off of excess hydrocarbons during refining.

Local air-quality management officials fined Chevron \$170,000 last year after investigators found that the refinery had failed to document 27 flaring incidents from 2005 to 2009. Officials said Chevron had a pipe that routed gases away from required pollution-monitoring equipment directly into the stack used to burn them off.

Hearne said that Chevron had installed the pipe before air-quality regulations went into effect and that the company had not intended to bypass monitoring equipment. He also said the

company's scientists estimate that the total amount of sulfur dioxide released during all the flaring was minimal.

'It is criminal,' mayor says

Richmond Mayor [Gayle McLaughlin](#), speaking at a community meeting Monday night, said it is irrelevant whether Chevron's actions had been intentional.

"That is not acceptable," she said of routing pollutants around monitoring equipment. "In fact, it is criminal."

Residents interrupted the meeting with shouts of "They're killing us!" and "Shame on Chevron!"

The Rev. [Kenneth Davis](#) expressed concern about the contaminants residents may have been exposed to during a shelter-in-place order after the fire broke out.

"I'm worried about the air," he said. "You tell me to shelter in place. I'm going to be 6 feet under if you keep this mess on me."

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