

# Ford Powerhouse Explosion - 1 February 1999

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## Rouge probe brings fines

Ford knew of danger, state says

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**BY NIRAJ WARIKOO and CHARLOTTE CRAIG**

FREE PRESS STAFF WRITERS

Top Ford Motor Co. officials had been warned for years about safety problems that could cause an explosion in Ford's Rouge power plant, but they did nothing to fix them, state investigators said Thursday.

### **WHERE FORD'S \$7 MILLION WILL GO**

- \$1.5-million civil penalty to be paid 45 days from now to the state.
- \$1.5 million to be spent by Ford at its plants in a nationwide boiler safety initiative, including training and equipment.
- \$1.2 million to be divided equally among burn care units at three hospitals: Detroit Receiving, University of Michigan and St. Vincent's in Toledo.
- \$300,000 to be donated to other hospitals, recipients to be decided.
- \$1 million to be donated to Michigan organizations for research and public awareness on workplace health and safety. Organizations will be picked jointly by MIOSHA, Ford and the UAW.
- \$1 million to be donated to a scholarship fund in memory of the workers killed in the explosion. The fund will be administered jointly by Ford and the UAW.
- \$500,000 set aside in a contingency fund to help pay the expenses of any state regulators who must testify or do research in any future litigation over the explosion.

The revelation came as the state released its findings on the blast and fined Ford \$1.5 million for safety violations in the plant, the largest state fine ever for violations of worker-safety laws.

The fine was part of an agreement Ford reached with the state and the United Auto Workers union. Ford also agreed to pay up to \$5.5 million to promote worker safety, fund medical burn research and establish scholarships.

Although Ford was cited for numerous safety violations, under the agreement the company admits to no fault in the Feb. 1 explosion that killed six workers and injured 14.

The state agreed not to seek criminal penalties or refer its findings to the Attorney General's Office for prosecution, according to Kathleen Wilbur, director of the state Department of Consumer and Industry Services.

Two independent audits, one in 1987 and one in 1997, and an internal report had recommended that Ford install a vent system to prevent dangerous gas buildups, state investigators said Thursday. Such a buildup led to the explosion in the 80-year-old power plant in Dearborn.

"The audits specifically told them," said Chuck Lorish, a supervisor with the Michigan Occupational Safety and Health Administration who investigated the blast. "But they took a look at

them and said, 'Naaaa.' "

Ford spokesman Nick Sharkey said in a statement Thursday that "the explosion was caused by an unfortunate set of circumstances, but, like many disasters, no one factor or vent was responsible for the gas buildup."

In announcing their findings at a press conference in Detroit on Thursday, investigators for the consumer services department said some safety devices at the power plant had been disabled or removed over the years.

Jim Padilla, Ford's group vice president for manufacturing, said: "It's not at all clear that, had we had all the bells and whistles on, it would have prevented this incident." But he said Ford is "working hard ...to make sure a tragedy like this never takes place again."

State investigators said Ford officials, including those on the six-person committee that oversaw the plant's maintenance, said installing a vent system - - considered the industry standard for the past 20 years -- would be too costly and cumbersome to maintain.



[GRAPHIC: Scene of the blast](#)

"One memo complained that if we upgraded, we'll have to upgrade every year," Lorish said. In 1989, a Ford study that recommended the vent installation went up the chain of command, but it was never passed on to Ford's safety division.

State investigators were planning to look into who in Ford's management knew about the safety problems. But the probe was cut short after Ford came forward with the idea of negotiating a deal.

The state findings included two reports released Thursday by the consumer services department, which oversees MIOSHA and workplace safety in Michigan.

One, from MIOSHA, detailed safety violations that Ford committed. They included inadequate procedure controls for workers, inadequate training, improper valve lineups and corrosion in several coal conveyor system covers.

In a statement, the department said "MIOSHA safety officers found a significant number of workplace safety and health violations at the time of the explosion."

But under the agreement with Ford, MIOSHA did not specify what type of violations they were.

In most cases, MIOSHA describes what type of violations a company commits -- minor, serious, repeated and serious, or willful and serious. A "willful and serious" violation means that the company knew violations existed and could have corrected them.

State investigators refused to say what type of violations Ford committed, but indicated that many were willful and serious.

The other state report, from the boiler division of the Bureau of Construction Codes, also under the Department of Consumer and Industry Services, looked at what happened Feb. 1. According to state investigators, an open valve allowed gas to rush through pipes and into the boiler. What

ignited the gas buildup is unknown, but possible sources of ignition were the electrostatic precipitator, refractor hot spots or slag.

Here's what boiler division investigators say happened on that wet day.

At 8 a.m., Boiler 6 was shut down for a routine annual maintenance and its flame was turned off. About noon, workers began blocking the natural gas supply to the boiler. The workers were blocking the west valve and then opened another part of it to vent it. But the east valve apparently remained open, allowing gas to rush through.

Why that valve remained open is unclear. But the report said the lack of step-by-step procedures caused the gas to build up and then ignite. Miscommunication among workers might have also led to the gas buildup, inspectors said.

And state investigators said Thursday, after the announcement, that if Ford had a vent system, the gas would not have built up in the first place. In their report, they said other safety devices, including pressure-relief valves and related alarms on the boiler and its fuel systems, had been disabled or removed over the years.

Padilla, the Ford group vice president, said one of the major safety devices was disconnected as long ago as 1966 -- "and we ran that operation safely and effectively for more than 30 years. So it's not clear to us that any one single thing could have prevented this occurrence.... There's no single point you can go to."

The device disabled in 1966 was a system "designed to shut down the boiler in the absence of a flame," according to Ford spokesman Nick Sharkey. Similar devices exist on most home gas-powered water heaters to keep gas from building up, should the pilot light go out.

The device was "taken out of service because it never worked. It frequently shut down the boiler, even when the boiler was running fine," Sharkey said.

Lorish, however, said that Ford had "several instances where they had a close call."

For some veteran workers at the power plant, the state's report confirmed what they have been saying for years -- that the power plant was an old, outdated facility that was in need of significant upkeep.

Ford officials announced last December that the plant was due to be closed, and replaced with a new power plant. The new plant is under construction and should be ready next year.

The seven-month probe by state officials was the largest and most complex in the history of state workplace-safety investigations.

The Dearborn fire marshal has also been conducting an investigation into the cause of the blast. The marshal recently ordered tests looking at the volatility of coal dust in the plant, said Dearborn Fire Chief Jack MacArthur. He expects to release the report sometime this month.

**NIRAJ WARIKOO** can be reached at 734-432-6501 or [warikoo@freepress.com](mailto:warikoo@freepress.com).  
**CHARLOTTE CRAIG** can be reached at 313-222-8775 or [craig@freepress.com](mailto:craig@freepress.com).

## SCENE OF THE BLAST

What investigators say they believe happened during the annual boiler maintenance shutdown to cause the Feb. 1 blast at the Ford Rouge power plant.

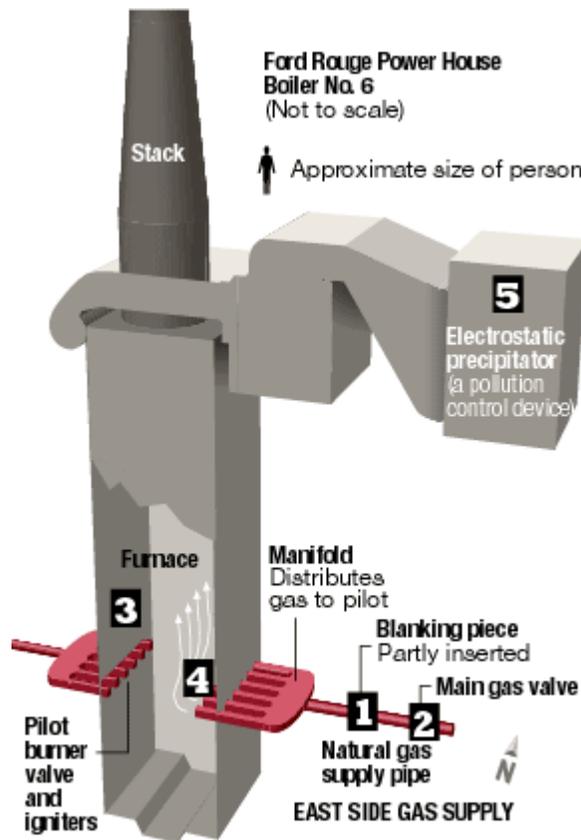
**1. Noon:** A crew on the east side of the boiler works to insert a blanking piece into the natural gas supply line to seal off the flow. A crew on the west has inserted theirs.

**2.** The east side main gas valve is open.

**3. 12:45 p.m.:** Pilot burner valves are opened from a control room to purge any remaining gas from supply lines through the boiler.

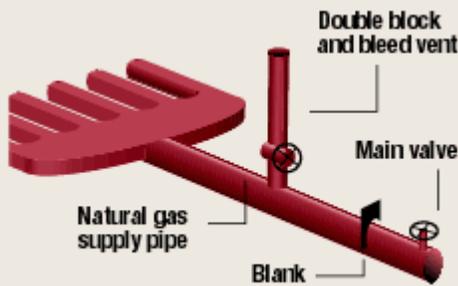
**4.** Gas flows into the furnace and builds up.

**5. About 1 p.m.:** Explosion. Investigators believe an electric spark in an electrostatic precipitator, which is a pollution-control device, may have ignited gas flowing through the furnace exhaust.



### POSSIBLE PREVENTION

State inspectors say a double block and bleed venting system probably would have prevented the gas buildup that led to the explosion. Outside consultants had recommended installation of such a system.



Sources: Department of Consumer and Industry Services, Bureau of Construction Codes Boiler Division;  
Free Press research by Mark Thompson-Kolar  
GENTRY J. SLEETS/ Detroit Free Press