Federal officials investigating the deaths Tuesday of two Metro employees are trying to determine why the driver of a Metro utility vehicle did not know that the men were working behind him on the tracks.

They are also trying to fathom why a long string of safety lapses and oversight failures that have been brought to light at the transit agency appears to continue unabated.

Five Metro workers have been killed on the tracks in the past seven months. The safety problems, including a Red Line crash June 22 that killed nine people, have triggered an upheaval in Metro's leadership and prompted the White House to plan an overhaul of transit oversight nationwide.

Tuesday's accident occurred about 2 a.m. near the Rockville Station when a truck, modified to operate on the rails and moving in reverse, backed into two technicians who were working on the tracks as part of a separate crew.

Safety rules require Metro officials to keep all vehicle operators informed about the locations of work crews, but auditors recently questioned whether that was being done effectively.

The gasoline-powered truck, known as a high-rail vehicle, typically carries gear and equipment and is used to travel along tracks where the electricity that powers trains has been turned off. The vehicles routinely travel in reverse but, unlike many trucks, do not always emit a beep.

Investigators did not say how fast the vehicle was moving.

Jeff Garrard, 49, of Clarksburg was pronounced dead at the scene. Sung Duk Oh, 68, of Montgomery Village died at Suburban Hospital in Bethesda. Garrard had worked for Metro since 1990, officials said, and Oh since 1998.

None of the four workers in the truck were injured. They were to undergo drug and alcohol testing, officials said.

Many details were not immediately made public, including whether one of the two technicians had been assigned to watch for oncoming traffic, as is generally required under Metro's safety rules. The National Transportation Safety Board said the four workers in the vehicle were placing devices to warn approaching trains to slow in advance of beginning their own work on the tracks.

The NTSB has launched a formal investigation, which experts said is an indication of the seriousness with which the board is taking the accident. The NTSB has been investigating the June crash, in which nine people were killed and 80 were injured, and a rail yard crash in November that injured three workers and caused at least $9 million in damage.

Federal investigators are examining the truck, track rules, radio communications, how many hours workers had been on the job, and physical conditions at the time of the accident Tuesday.

Metro's board chairman, Jim Graham, told reporters that the accident "was a direct result of human error" but did not elaborate. "If people pay attention to their duties, then our system is perfectly safe," he said.

In an e-mail to employees Tuesday, Metro General Manager John B. Catoe Jr. said that the "grief that we feel for those who have died is magnified by the nagging question, 'could this have been prevented?' This is a question I want every Metro employee to consider: 'Is there something I could have done better to prevent this accident?'"

Catoe announced Jan. 14 that he would step down from his job, citing "incessant publicity" about safety lapses. Catoe, who has run Metro for three years, said he wanted to give the troubled agency a chance for a new start. Metro is searching for a new leader at a time when it is facing myriad problems.

The accident Tuesday severely disrupted the morning rush on the Red Line, the system's busiest, and sparked renewed safety concerns among commuters. The past 12 months have been the deadliest in Metro's 33-year history.

"Let me tell you something: I'm scared to ride the subway. It's fearful," Mary Williams, 45, of Gaithersburg said while waiting for a bus at Shady Grove, the end of the Red Line in Montgomery County. Williams said Metro "should have some type of safety put forth for their workers."

Metro has had eight worker fatalities on the tracks since 2005, accounting for more than 60 percent of the national total, according to federal data.
A report released this month by the Tri-State Oversight Committee found that Metro failed to have a "clear written procedure" for designating who in a work crew should be a lookout for oncoming vehicles and when.

The regional group that oversees Metro safety also said the transit agency had no formal procedure to establish how central train controllers should monitor the locations of workers on the tracks so that they can alert other workers and train operators.

Independent safety monitors looking into the deaths may have insight into the incident. Last month, a team of inspectors almost met the same fate. On Dec. 10, while monitors walked along tracks to assess whether Metro was following rules meant to protect track workers, a Metro train bore down on them without warning. The monitors said the train appeared to be traveling at full speed, about 59 mph, and was making no attempt to slow, as required by agency rules.

In the oversight committee's report, the inspectors said they "experienced a near-miss situation" and "were forced to quickly scramble out of the way to avoid being struck."

The near miss was one of several warning signs in the inspection report. In other instances, inspectors said that train operators had failed to respond to hand signals from track personnel and that Metro's control center had failed to give operators adequate warning about where workers were stationed on the tracks. The report also said inspectors detected antagonism between track workers and train operators.

The review concluded that Metro's safety training was inadequate and that the transit agency needed to take "immediate, short-term corrective action" to ensure worker safety. It said Metro also should evaluate all rules and procedures governing workers on tracks.

In response, Metro held a safety work session this month with experts from transit agencies around the country.

Metro has a history of problems with worker safety.

After four subway workers were fatally struck by trains in 2005 and 2006, Metro imposed new safety rules. In 2007, monitors for the oversight committee walked the tracks and reported an unusually high number of violations.

Metro responded at the time by adopting more safeguards meant to correct the problems and further protect workers.

Worker safety has been only one of many safety issues confronting Metro this year.

After the June crash, Catoe publicly described the failure of Metro's automatic crash-avoidance system as "a freak occurrence."

But in the following months, The Washington Post reported on systemwide problems in train-control technology and safety oversight.

Staff writers Ashley Halsey III, Lisa Rein, Ann Scott Tyson and Debbi Wilgoren contributed to this report.

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