

Virgin disaster is a reminder of deadly explosion

November 3 2014, by Brian Melley



National Transportation Safety Board (NTSB) Acting Chairman Christopher A. Hart speaks in a press conference on the crash of SpaceShipTwo on Saturday, Nov. 1, 2014 in Mojave, Calif. The explosion killed a pilot aboard and seriously injured another while scattering wreckage in Southern California's Mojave Desert, witnesses and officials said. (AP Photo/Ringo H.W. Chiu)

The loss of an experimental spaceship that broke up over the Mojave Desert, killing one pilot and seriously injuring another, has renewed criticism of the way the craft's designer and Virgin Galactic handled a

deadly explosion seven years ago.

Space enthusiasts watching Virgin Galactic's race to send tourists on suborbital flights have complained for years about a 2007 explosion that killed three people on the ground and critically injured three others during a ground test in the development of a rocket engine for the same vehicle that crashed Friday.

"Now we've got another person killed, another person seriously injured. So we've got a lot that has hurt the industry," said Geoff Daly, an engineer who has filed complaints with several federal agencies over the use of nitrous oxide to power the ship's engine.

SpaceShipTwo tore apart Friday after the craft detached from the underside of its jet-powered mothership and fired its [rocket engine](#) for a test flight. Authorities have not given any indication what caused the accident. National Transportation Safety Board investigators were on the scene Sunday. The agency could take up to a year to issue a final report.

The accident was the second fiery setback for [commercial space travel](#) in less than a week. On Tuesday, an unmanned commercial supply rocket bound for the International Space Station exploded moments after liftoff in Virginia.

Daly was co-author of a critical report on the 2007 incident at Scaled Composites, the Northrop Grumman-owned designer of SpaceShipTwo. Among the report's complaints was that the public was never given a full accounting of what went happened.

"Something is wrong here," Daly said Sunday. "We offered to talk, give our experience. It was either ignored or totally dismissed."

Virgin Galactic CEO George Whitesides issued a statement Sunday.



Billionaire Virgin Galactic founder Richard Branson salutes the bravery of test pilots, and vows to find out what caused the crash of his prototype space tourism rocket that killed one crew member and injured another during a news conference in Mojave, Calif., Saturday, Nov. 1, 2014. Virgin Galactic's SpaceShipTwo blew apart about 20 miles (32 kilometers) from the Mojave airfield after being released from a carrier aircraft Friday. (AP Photo/Brian Melley)

"Now is not the time for speculation," he said. "Now is the time to focus on all those affected by this tragic accident and to work with the experts at the NTSB, to get to the bottom of what happened on that tragic day, and to learn from it so that we can move forward safely with this important mission."

In a June 2013 letter, Daly asked the Federal Aviation Administration to

put a hold on an experimental flight permit for SpaceShipTwo to ensure the safety of personnel on the ground and in the spacecraft.

"Remember, three people have been killed and numerous persons injured by a prior explosion involving (nitrous oxide) in this motor design," he wrote as a member of a group that he said numbered about 300 people in the aerospace industry worldwide. "We do not need another incident on the ground/flight line or in the air."

There's no evidence from documents posted online that the FAA halted any flights for SpaceShipTwo.

Carolynne Campbell, a co-author of the report on the explosion, posted a statement on her website after Friday's accident, saying "if the truth about the 2007 accident had come out," the explosion that destroyed SpaceShipTwo "would probably not have happened."

A report by the California Division of Occupational Safety and Health said the 2007 blast occurred three seconds after the start of a cold-flow test of nitrous oxide. The engine was not firing during the test at the Mojave Air and Space Port.



This three image combo photo shows the Virgin Galactic SpaceShipTwo rocket separating from the carrier aircraft, left, prior to it exploding in the air, right, during a test flight on Friday, Oct. 31, 2014. The Virgin Galactic rocket that exploded during a test flight, killed a pilot aboard and seriously injured another while scattering wreckage in Southern California's Mojave Desert, witnesses and officials said. (AP Photo/Kenneth Brown)

Whether nitrous oxide had anything to do with Friday's disaster remains to be seen.

The nitrous oxide is used with fuel to provide propulsion. Engineers had recently changed the fuel system, switching from a rubber-based fuel to one that used plastics. The new fuel had been tested on the ground but not in flight until Friday.

During the investigation, Virgin and Scaled Composites are barred from making any comments about the accident.



The Virgin Galactic SpaceShipTwo rocket explodes in the air during a test flight on Friday, Oct. 31, 2014. The explosion killed a pilot aboard and seriously injured another while scattering wreckage in Southern California's Mojave Desert, witnesses and officials said. (AP Photo/Kenneth Brown)

"I find it slightly irresponsible that people who know nothing about what they're saying can be saying things before the NTSB makes their comments," billionaire Richard Branson, Virgin's founder, said Saturday.

Burt Rutan, who founded Scaled Composites and has since retired, said it's too early to know what went wrong, but he did not think the two accidents were connected because it appeared from photos and video that the ship's oxidizer tank was intact.

If [nitrous oxide](#) had been to blame, "that tank would be in many pieces," he said.



The Virgin Galactic SpaceShipTwo rocket explodes in the air during a test flight on Friday, Oct. 31, 2014. The explosion killed a pilot aboard and seriously injured another while scattering wreckage in Southern California's Mojave Desert, witnesses and officials said. (AP Photo/Kenneth Brown)



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National Transportation Safety Board (NTSB) Acting Chairman Christopher A. Hart speaks in a press conference on the crash of SpaceShipTwo on Saturday, Nov. 1, 2014 in Mojave, Calif. The explosion killed a pilot aboard and seriously injured another while scattering wreckage in Southern California's Mojave Desert, witnesses and officials said. (AP Photo/Ringo H.W. Chiu)



In this Sept. 25, 2013, file photo, British entrepreneur Richard Branson poses with SpaceShipTwo at a Virgin Galactic hangar at Mojave Air and Space Port in Mojave, Calif. The Virgin Galactic's SpaceShipTwo space tourism rocket exploded Friday, Oct. 31, 2014, during a test flight, killing a pilot aboard and seriously injuring another while scattering wreckage in Southern California's Mojave Desert, witnesses and officials said. (AP Photo/Reed Saxon, File)



In this April 29, 2013 file photo provided by Virgin Galactic shows Virgin Galactic's SpaceShipTwo under rocket power, over Mojave, Calif. Virgin Galactic has reported an unspecified problem during a test flight of its SpaceShipTwo space tourism rocket. The company tweeted Friday, Oct. 31, 2014, morning that SpaceShipTwo was flying under rocket power and then tweeted that it had "experienced an in-flight anomaly." The tweet said more information would be forthcoming. (AP Photo/Virgin Galactic, Mark Greenberg, File)



In this Sept. 25, 2013, file photo, shows Virgin Galactic's SpaceShipTwo at a Virgin Galactic hangar at Mojave Air and Space Port in Mojave, Calif. Virgin Galactic has reported an unspecified problem during a test flight of its SpaceShipTwo space tourism rocket. The company tweeted Friday, Oct. 31, 2014, morning that SpaceShipTwo was flying under rocket power and then tweeted that it had "experienced an in-flight anomaly." The tweet said more information would be forthcoming. (AP Photo/Reed Saxon, File)



Staff of Virgin Galactic stand guard outside the company's facilities at Mojave Air and Space Port after the company has reported an unspecified problem during a test flight of its SpaceShipTwo space tourism rocket in Mojave, Calif. Friday, Oct. 31, 2014. (AP Photo/Ringo H.W. Chiu)



National Transportation Safety Board (NTSB) Acting Chairman Christopher A. Hart takes questions in a press conference on the crash of SpaceShipTwo on Saturday, Nov. 1, 2014 in Mojave, Calif. The explosion killed a pilot aboard and seriously injured another while scattering wreckage in Southern California's Mojave Desert, witnesses and officials said. (AP Photo/Ringo H.W. Chiu)



Billionaire Virgin Galactic founder Richard Branson, left, and George Whitesides, CEO of Virgin Galactic, comment on the crash of their prototype space tourism rocket, that killed one crew member and injured another during a news conference in Mojave, Calif., Saturday, Nov. 1, 2014. Virgin Galactic's SpaceShipTwo blew apart about 20 miles (32 kilometers) from the Mojave airfield after being released from a carrier aircraft Friday. (AP Photo/Brian Melley)



Wreckage lies near the site where a Virgin Galactic space tourism rocket, SpaceShipTwo, exploded and crashed in Mojave, Calif. Friday, Oct. 31, 2014. The explosion killed a pilot aboard and seriously injured another while scattering wreckage in Southern California's Mojave Desert, witnesses and officials said. (AP Photo/Ringo H.W. Chiu)

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