

What Caused the Calif. Natural Gas Explosion?

By [Alyssa Danigelis](#) | Fri Sep 10, 2010 03:36 PM ET



A horrific explosion in San Bruno, Calif., yesterday initially prompted fears of an airplane crash. The source turned out to be a ruptured natural gas line, but what failure actually caused the deadly, Bruckheimer-like scene?

Pacific Gas and Electric Company, PG&E, [told the Associated Press](#) that a 30-inch gas pipe had ruptured several feet underground. PG&E told reporters that the blast originated in a steel gas pipeline about two feet in length, but they [don't know the cause yet](#) because the fire was still going this morning.

The National Transportation Safety Board sent a team to investigate the San Bruno explosion so we won't have a final word on what happened until they release details.

If the past is any indication, I suspect that investigators will end up discovering a fault with the pipeline structure.

Two years ago [a natural gas explosion](#) killed one man, injured five, and damaged homes in Rancho Cordova, Calif. In that case, a PG&E technician used a packing pipe that wasn't approved for repairs to fix the pipeline. The polyethylene pipe wasn't thick enough for the job and [caused a leak](#).

Usually repairs require an approved method that uses a nylon and steel fitting to produce a gas-tight seal, according to the National Transportation Safety Board [report](#) (PDF).

Ron Kendall, director of the Institute of Environmental and Human Health at Texas Tech University, says

that he thinks the gas leak in San Bruno must have happened over time.

"When that explosion formed it blew 100 feet in the air. That suggests to me that it was more than a pipe breaking," he told me. "Once you've got a pocket of gas in a zone, once you get a source of ignition, it goes."

He wonders whether seismic activity could have caused cracks in the pipe.

Natural gas has an additive to make it smell, precisely for those times when the pipes fail. San Bruno residents now say that they smelled gas in the area intermittently for weeks. While we can't monitor every inch of the thousands of miles of natural gas pipeline in this country, our noses can.

Photo: A natural gas explosion was at the center of the San Bruno fire. Credit: KRON 4 viewer via Flickr user [smi23le](#).

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