**Hundreds of miles of gas lines corroding, experts warn**

by BRETT SHIPP

WFAA

Posted on February 19, 2013 at 10:00 PM

Updated today at 9:18 AM

DALLAS  In the summer of 2011, three people were critically injured when their Oak Cliff home exploded as a light switched was flicked on. [Initially blamed on a lightning strike](http://www.wfaa.com/news/investigates/Family-blames-burns-on-natural-gas-leak-131826498.html), an investigation by the Texas Railroad Commission ended with the state issuing a notice of violation to Dallas-based Atmos Energy.

That family now personifies a criticism raised by public safety experts: More than 800 miles of Atmos piping is made of cast iron, a material that a federal agency advised gas providers to phase out as far back as 1973, citing issues with deterioration and corrosion.

The violation given to Atmos Energy said the company did not have a "cast-iron replacement program in place."

"I just felt a ball of fire burning," said Domingo Mendez, recalling the night of September 18, 2011 when his garage apartment exploded. "Then, I guess a few seconds after that I just woke up on the floor."

More than a year later, Domingo and his wife Juliana appear happy and healthy. But they'll never escape the horror of that night. They still have thick, painful scars on their torsos and arms.

That night, they had just returned to their small apartment and turned on a light. The explosion knocked them to the floor, leaving them all hospitalized for weeks in intensive care with critical injuries. Juliana and Pablo, their five-year-old son, were close to death.

Bed ridden himself, Domingo was powerless to comfort his child.

"I would just hear him crying," he said. "It was terrible."

Hours after the explosion, Atmos workers unearthed a clue: a 19-inch fracture in a cast iron gas main in a nearby alley. The pipe was a mere three feet from the Mendez's apartment. Experts later hired by the family called the 80-year-old pipe corroded, brittle and destined to fail.

"The age of this (pipe) and the condition of it was filthy. It was pitted, it was dirty, it even had roots growing into the inside of it," said pipeline safety expert and former Exxon employee Don Deaver. "It has had holes in it for years and years and years and years."

Deaver said that particular cast iron pipe had been leaking for some time along with other points in the same line in that alley. Deaver said Atmos should have known that the pipe would fail, just like thousands of other cast-iron pipes in the Atmos Texas system have done for decades.

A log of cast iron leaks in the Atmos system on file at the Texas Railroad Commission headquarters reveal more than 2,300 repairs in the past four years. These are mostly in older Dallas neighborhoods in the southern sector; east Dallas and Uptown; and Highland Park as well as University Park.

Older sections of Fort Worth are also heavily impacted. What's more, Deaver said cast-iron pipes have a lethal legacy of failure.

"This is obsolete, inferior, degrading material that, over time, sees more and more things pulling and stressing on it, causing it to fail," he said. "It's a collision course, it's the perfect storm."

In January of 2012, an Austin man was killed when a cast-iron pipe corroded and cracked, leaking natural gas into his home, which later exploded. In 2011, in Allentown, Penn., a cast-iron pipe installed in 1928 was responsible for an explosion that killed five people.

This is a problem that Atmos and other gas companies have known about for decades. In 1973, the National Transportation Safety Board, which regulates gas transmission lines, warned providers about corrosion of "cast-iron mains" and advised that they each take "necessary action."

In 1985, the NTSB took a bolder step warning gas companies of "cast-iron main failures" and recommended that all "cast-iron mains  should be phased out." Another NTSB advisory came in 1992, recommending gas industry operators adopt "cast-iron piping replacement programs."

Entex, now called CenterPoint Energy, did exactly that, removing all of its cast-iron pipes from below the city of Houston. The state's most populous city has had a cast iron-free natural gas distribution system since the early 1990s.

Meanwhile, Atmos still has 841 miles more than 2 percent of its entire Texas system  of cast-iron piping. The vast majority remains under the alleys and streets of Dallas.

Atmos Energy has repeatedly declined to provide News 8 with a map of where the cast iron is located. We have, however, mapped the locations of all the repairs since 2009.

"I think the citizens of Dallas have an absolute right to know where this cast-iron is," said Clay Miller, an attorney who represented the Mendez family in a lawsuit against Atmos Energy. The two parties later settled.

"I think if more people knew that it was in their backyard and under their streets, the uproar after this type of incident would be so great that, hopefully, it would cause these cast iron pipes to get out of the ground," the attorney added.

Atmos Energy declined an on-camera interview to discuss the Mendez explosion and its aging cast-iron system. In a statement to News 8, Atmos said its "natural gas system is safe and reliable."

Atmos says it "monitors and surveys its pipelines at a frequency that meets or exceeds government standards." Atmos says it has a "pro-active pipe replacement program"  "developed in compliance with state and federal regulatory entities."

Yet last November, after the Texas Railroad Commission completed its investigation into the Mendez home explosion, the state issued Atmos a notice of violation in connection with that incident. Atmos was cited for not having a "cast-iron replacement program in place."

In a recent legal deposition, Atmos representative Lance Andrews testified saying "there is no proactive cast-iron replacement program in (Atmos) Mid-Tex Division."

Meanwhile, young Pablo Mendez is just days away from another surgery to help his face and hands heal. What may never heal, however, is the fear his parents still feel not knowing if the gas main behind their new house is cast-iron and waiting to fail.

"It makes us pretty scared still," Domingo said.