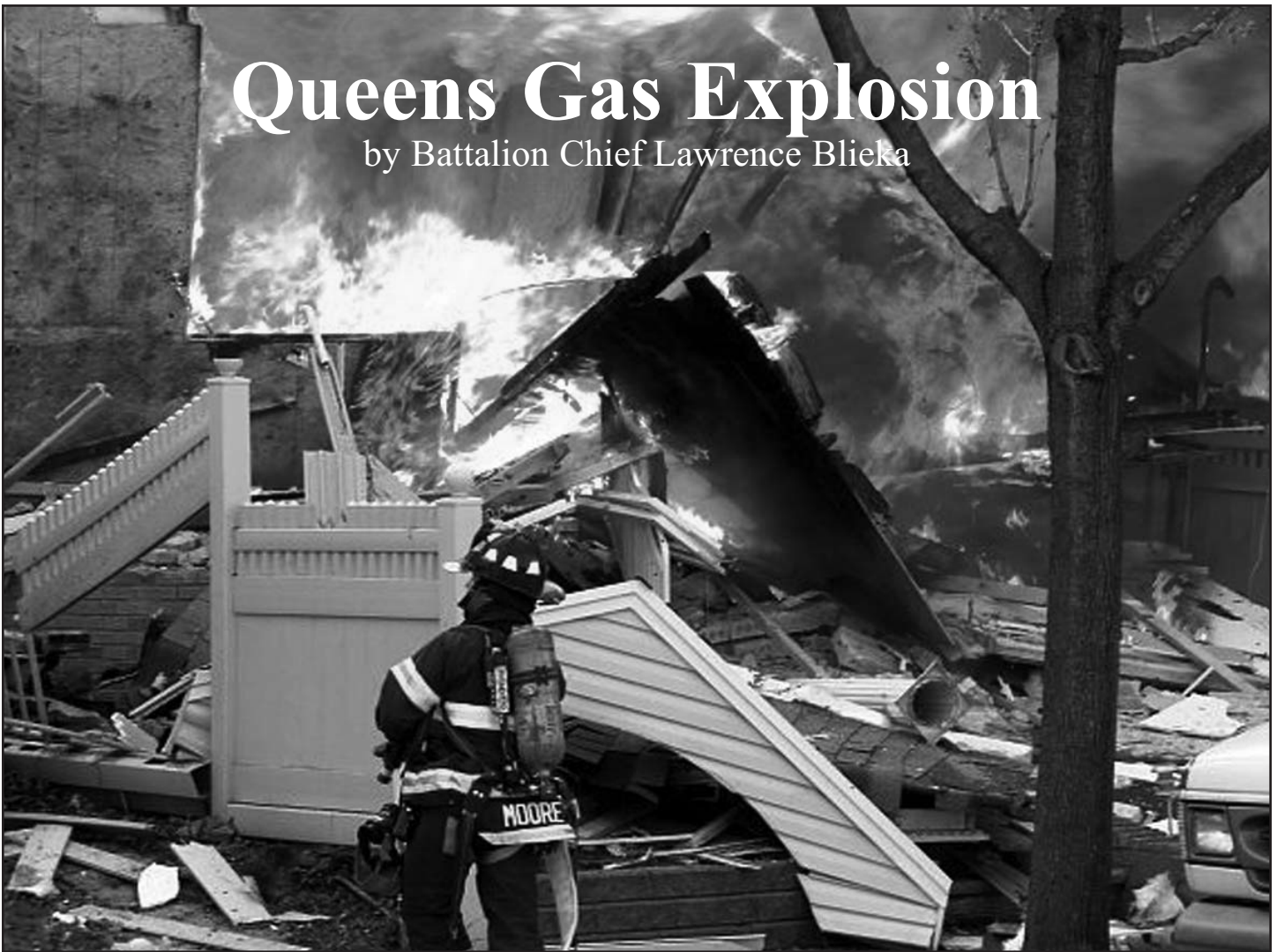


# Queens Gas Explosion

by Battalion Chief Lawrence Blieka

photos by Matthew Palmer, Con Ed



April 24, 2009, was a beautiful spring day, with sunny skies and temperatures in the 70-degree range. The day tour at Battalion 53 had been relatively quiet, answering a few alarms for minor emergencies and performing routine administrative duties that are a part of everyday firehouse life. In the late afternoon, this quiet calm was shattered quickly.

The Queens dispatcher transmitted Box 6773 at 1650 hours for a report of a building explosion. While pulling out of quarters, the dispatcher notified Battalion Chief Lawrence Blieka, Battalion 53, that they now were receiving reports that three children might be trapped in the structure. As Chief Blieka turned down Union Turnpike--still some two miles from the reported explosion--a very large column of smoke could be seen in the distance.

At this point, Lieutenant Timothy Keenan, Engine 251, transmitted a 10-75, based on the smoke condition and the fact that he and his members had felt the impact of the explosion in quarters, approximately eight blocks away. Immediately on arrival at the Box, Engine 251 transmitted a 10-60 (major emergency response), followed by a second alarm, at 1654 and 1655 hours, respectively.

## Conditions on arrival

Chief Blieka gave a 10-84 signal (arrival announced) at 1657 hours and was met with the following conditions:

- A very heavy odor of natural gas permeated the outside atmosphere on 260th Street from 79th to 80th Avenues.
- 80-50 260th Street, a two-story, 20- by 40-foot private dwelling, was fully involved in fire, with the first and second floors pancaked onto its foundation, due to a natural gas explosion.
- 80-54 260th Street (Exposure #2), a two-story, 20- by 40-foot

private dwelling, had sustained significant structural damage to its #4 side and had heavy fire in the basement and first and second floors.

- 80-46 260th Street (Exposure #4), a two-story, 20- by 40-foot private dwelling, had sustained significant structural damage to its #2 side and had heavy fire on the first and second floors.
- 80-49 259th Street (Exposure #3) had sustained structural damage to its rear and detached garage from the explosion.

## Initial operations

Before the arrival of Chief Blieka, Lieutenant Keenan had split up his company. One member of Engine 251, assisted by two off-duty members, operated a 2<sup>1</sup>/<sub>2</sub>-inch line into 80-54 260th Street from the exterior. The Officer and his two remaining members stretched a 1<sup>3</sup>/<sub>4</sub>-inch line and entered 80-46 260th Street, extinguishing all fire on the first floor and eventually operating their hose-line on the original fire building from the rear of Exposure #4, preventing extension into Exposure #3.

These actions were critical to the success of FDNY's operations. If not for the aggressive performance by Engine 251 members in attacking these expanding fires and resultant radiant heat, it is the author's opinion that the fires would have spread to more of the surrounding properties.

While operating on the Exposure #2 building (80-54 260th Street), one of the Engine 251 off-duty members, FF Anthony Conte, observed a disoriented elderly woman in one of the windows. Under the protection of the 2<sup>1</sup>/<sub>2</sub>-inch hose-line, he entered the occupancy and removed the 87-year-old female, just prior to the building becoming completely engulfed in fire.



The electrical conduit and gas line that caused the explosion.

Shortly after arriving at the scene, Chief Blieka was met by Matthew Palmer, a supervisor on Con Ed's Emergency Response Team, who informed him that Con Ed staff were on the scene prior to the explosion. They had been dispatched to the scene for an outside gas leak. While determining the extent of the leak, the explosion occurred. Mr. Palmer also told Chief Blieka that all his personnel were accounted for and the street valves on both sides of the block already had been closed by Con Ed personnel, isolating the leak. However, he could not determine if any other structures on the block were affected by the leaking gas. On their arrival, Chief Blieka deployed the rest of the first-alarm assignment as illustrated.

### Continuing operations

Deputy Chief Paul Ferro, Division 13, arrived at 1713 hours and assumed Command. He conferred with Chief Blieka on the status of the following:

**Gas service**--While the leak had been isolated with the closing of the street valves, it still had to be determined if any other structures were affected. Chief Ferro used units of the Haz-Mat Group for their metering capability, along with second-alarm ladder companies, to complete the searches and evacuate all houses on 260th Street between 80th and 81st Avenues.

**Reported victims**--Primary and secondary searches in Exposures #2 and #4 were completed and found negative (with the exception of the elderly woman found in Exposure #2). While the report of three children trapped in the explosion proved to be false, sadly, the mother of the children was unaccounted for and eventually was recovered in the basement of 80-50 260th Street at 2055 hours.

Chief Ferro next ordered the operation divided into three Sectors, with a Battalion Chief assigned as the Sector Supervisor of each Sector. The Sectors were the collapsed fire building (Chief Blieka), Exposure #2 (Battalion Chief William McCormack, Battalion 54) and Exposure #4 (Battalion Chief Bradley Walls, Battalion 50). Additionally, Chief Ferro transmitted third and fourth alarms at 1754 and 1905 hours, respectively.

With doubts about the structural stability of both Exposures #2 and #4 and because of damage from the explosion and the heavy fire load, Chief Ferro ordered all interior operations halted and a tower ladder operation set up. Final extinguishment was completed with two tower ladder streams and hand-lines operated from the exterior. The fire was declared *under control* at 2116 hours.

### Cause of the explosion

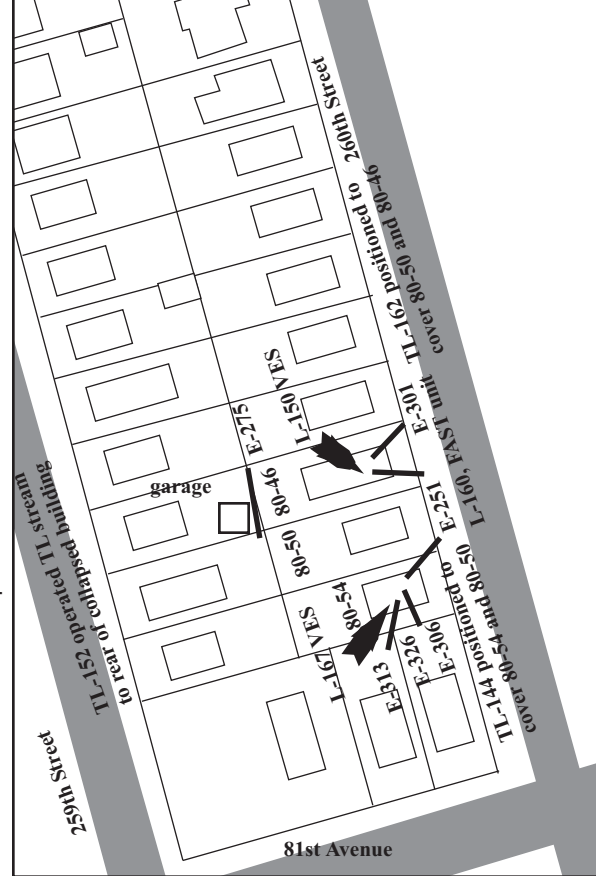
This section of 260th Street is fed by underground electrical services. A conduit making contact with a two-inch, high-pressure gas line short-circuited, causing the conduit to become energized. This energized conduit arced, compromising the gas line. The leaking gas entered the electrical conduit and traveled through it into the basement of 80-50 260th Street where it was ignited by an undetermined ignition source.

### Lessons learned/reinforced

**Apparatus Positioning**--Engine 251's decision to position their apparatus on 80th Avenue, rather than on 260th Street, left the fire block open for the eventual use of two tower ladders to confine and ultimately extinguish the fire. Officers and chauffeurs should anticipate the possible need of master streams and position their

The remainder of the first-alarm assignment was deployed as follows:

- Engine 326 stretched and operated a 1 3/4-inch hose-line into the first floor of Exposure #2.
- Engine 313 stretched and operated a 1 3/4-inch hose-line into the second floor of Exposure #2.
- Engine 301 stretched and operated a 1 3/4-inch hose-line into the second floor of Exposure #4.
- Ladder 162 performed vent, entry, search (VES) of Exposure #2 and operated its tower ladder stream on the collapsed fire building.
- Ladder 164 performed VES of Exposure #4.
- Ladder 144 positioned its tower ladder to cover the collapsed fire building and Exposure #4.



apparatus accordingly at large and or expanding operations.

**Underground Utilities**--During size-up, members should be aware of and take into account that if the emergency involves an underground utility (electric, gas, water or steam), any of the adjoining utility's serviceability and safety can be severely compromised. In the past, FDNY members have experienced many examples of this; i.e., water main breaks have undermined gas mains; gas and steam explosions have damaged water mains, sewers and electrical feeds; and transformer fires with burning underground wires have compromised plastic gas mains.

**Sectoring**--At large or complex operations, sectoring allows the Incident Commander to manage the operation more effectively, simultaneously helping to ensure the safety of FDNY operating forces.

**Proactive Response**--Early and appropriate transmission of alarms (10-60, second alarm) at this expanding operation was vital in providing the required manpower and technical resources to successfully extinguish this fire and recover the victim.

**Complacency at Gas Leaks**--The outcome of this operation could have been very different if the leaking gas ignited after FDNY arrival. All members must remain ever vigilant to the dangers of what are, at most times, considered *routine* calls. Metering of the atmosphere and the full use of all personal protective equipment contribute to a safe operation. The proper use of the MSA Altair Multigas Meter, employed in conjunction with the TIF 8800 combustible gas detector, allow units operating at suspected gas leaks to both pinpoint the source of the leaking gas and determine if the atmosphere is approaching the lower explosive level. The explosive range for natural gas is five to 15 percent.

### About the Author...

Battalion Chief Lawrence Blieka is a 26-year veteran of the FDNY. He is assigned to Battalion 53. Prior assignments include Ladder 6 as a Firefighter; Ladder 12 as a Lieutenant and the Captain of Engine 230. This is his first article for WNYF.



Members are urged to review "Introducing the MSA Altair Multigas Meter," by Captain Carlos Vazquez, in the 1st/2009 issue of WNYF.