

THE DISASTER RESEARCH CENTER  
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Research Note #13

The Jamaica, Queens New York Explosion and Fire

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## Introduction

On January 13, 1967 a gas explosion at 5:30 a.m. occurred in the South Jamaica section of Queens, New York. Although the blast and ensuing blaze demolished nine houses and badly damaged eight others plus garages and shops, hundreds of persons were evacuated without a single casualty. Only two policemen and a fireman suffered minor injuries.

Because of its localized nature, this kind of incident would normally not be studied by the DRC. However, there were some special features of this particular event that seemed to make it worthwhile sending a field team to New York City.

These were:

- 1) Reports from the mass media indicated an extremely rapid and successful evacuation of endangered residents. Previous disaster studies clearly indicate that such a response is very rare even when an emergency is clearly present. A research question therefore was to account for the untypical response in this particular disaster situation.
- 2) Press accounts indicated that in response to thirteen alarms, the New York City Fire Department mobilized 54 companies and supposedly over 600 men. The convergence of so much equipment and manpower into a relatively limited area crowded with also converging police and departing residents would seem to have presented some problems of coordination and control. Another research question was to examine how and what problems the fire department encountered in this situation.

3) None of the disasters so far studied by DRC have involved in a major way, the gas company of the community. In this emergency, the very nature of the disaster and its possible extension depended on the activities of a key utility company. The research question here was simply how a gas utility mobilized and handled this larger than usual emergency.

To examine these and any other disaster relevant data that could be obtained, a four man DRC team was sent to New York City (actually the trip was used as an initial training trip for two new members of the DRC field staff). The team arrived in New York Friday afternoon, with the last member returning to Columbus on Wednesday. In the course of its field work the field team contacted officials and personnel in the following organizations:

- New York City Fire Department
- New York City Police Department
- New York City Civil Defense
- New York Area Red Cross
- Consolidated Edison
- Brooklyn Union Gas Company

#### I. Warning and Evacuation

The 103rd precinct of the police department in Queens was notified by a phone caller at 5:14 a.m. on Friday, January 13 that there was a gas leak in the vicinity of 101st Avenue and Brisbane Street. The call was relayed to a patrol car in the area. The patrolmen reached the scene in approximately three minutes. Upon arriving, they not only smelled gas but also heard a roaring noise that they interpreted as being caused by the pressure of escaping gas. Assuming that the

leak was quite serious they immediately put a call in to their communication center asking for more men. Communications put out a rapid mobilization code for all available personnel to proceed to the area.

At about this same time (5:19) the fire department was notified, evidently by one of the first patrolmen on the scene activating a fire alarm box. The fire department responded with a ladder and engine company. The crews on the fire apparatus had no information as to the type of call that they were answering. Upon arriving in the vicinity they saw a delivery truck parked with its lights on. Thinking it was perhaps an accident, the firemen pulled near the truck. This location was quite near the leak and the fire engines stalled as a result of the lack of oxygen in the air caused by the escaping gas. The men on the truck then heard "the roaring", as they put it, of the escaping gas. Realizing the danger, they ceased any efforts to restart the trucks.

The men followed the officers in charge and the two crews -- one of five and the other of six men -- went in opposite directions away from the trucks. The officers gave the men orders to get everyone out of the surrounding houses. One man was assigned to each building which were two family type, for the most part. The firemen proceeded to go down the street on either side of the intersection. They knocked on doors and the people answering were told to get out. By the time the fire started the firemen had all the people on the street headed away from the area. Two police patrolmen had also been awakening people. By the time other contingents of police and firemen started arriving, the gas had ignited, no one is sure how. This first evacuation took place in about 5-8 minutes and removed

some 50 people from the buildings in the immediate vicinity of the consequent fire. The police then kept evacuating people eventually removing people from a 3 by 4 block area.

Observations on evacuation:

- 1) Both police and firemen mentioned some reluctance on the part of some people to leave their homes. One fireman estimated that perhaps 25% of those he contacted presented problems. He stated that not only were people reluctant to leave but as he put it they were "too slow moving." In several cases the firemen did not get an answer to a knock on the door. In these instances they broke in through a window or door and awakened the family in the bedroom. The firemen were concerned that they could not tell if the family was absent or asleep and they did not want to take a chance of missing anyone. In several cases, in order to hurry people along, the firemen carried the children out first (as they said, the parents "would be sure to follow"). Families with small children seemed easiest to convince to leave. A policeman physically carried a person out who refused to leave. In another case, a fireman picked up an elderly woman who was too confused to act promptly.
- 2) Several firemen commented on how fortunate it was that no one was injured or hurt because there had been no certainty that everyone had been evacuated. For example, after the gas had ignited a man came out from the back of a house where he had a rear basement apartment, of which no one had been aware.

- 3) A fireman commented that it is standard procedure for the crew of one truck to follow the crew that first leaves the trucks when two pull up simultaneously. Because of their rush, however, the two crews went in opposite directions. This was quite fortuitous in that it helped greatly the efficiency of the evacuation activities. If they had not acted in this way, they would have had difficulty continuing their warning activities after the fire started. The fire would have been between them and the other side of the intersection.
- 4) The evacuation then, was less similar to the type of evacuation normally seen in, for example, flood situations. Here many people awoke to a fireman telling them to leave their home. This is different psychologically from someone being notified matter of factly by a policeman that there is possible danger to an area and everyone should leave. Of course after the fire started, and it was obvious that there was a possibility of it spreading, people were "easier to move along."
- 5) During the first evacuation before the fire, people were not told to go to any specific place. They were simply told to get out of the building and "away." However, once outside, police and firemen herded them away from the gas leak.

#### The Fire Department

The fire department received a box alarm at 5:19 a. m. and one engine and ladder company proceeded to the address. Their first response was to evacuate people in the immediate area as described above. The battalion chief, upon arriving, sent in a second alarm to help with the evacuation proceedings. At the

time the gas exploded, an assistant chief coming to the scene saw the flash (while approaching the area) and sent in a 3rd alarm on his radio. A total of 13 alarms were called in, the biggest assignment in the history of the New York Fire Department. (The number of alarms refers to the amount of men and equipment called for. For example, a first alarm might call for one pumper and one ladder truck. A third alarm assignment could be three times this. Thus, 13 alarms does not mean that 13 different calls were made -- in fact, in this instance there were only eight calls.)

When the fire started one of the crews assisting in evacuating went into the burning buildings to make doubly sure no one was left inside. Both of the trucks of the first crews to arrive were caught in the explosion. They were a total loss so the men had no hoses or other equipment at this time. Other companies started arriving around 5:35 and proceeded to fight the fires as well as setting up water screens to protect buildings that had not yet caught fire. The fires in the buildings started from radiant heat caused by the explosion and burning of the gas flame in the middle of the street. This flame burned at a height of some 50 feet until approximately 3:00 a. m., although by 7:00 a. m. it was felt that the fire was no longer out of control.

#### Observations on the fire department:

- 1) Firemen reported no problem in the matter of coordination or procedure in fighting the fire. Apparently, there was no problem in getting equipment into the area. Pertinent to this point is that many of the engines and men were used to bring hose lines up from some distance because the water

mains in the immediate vicinity of the blaze were smaller than required. Thus, not all the equipment was assigned to the one small area of the fire. The streets had not been blocked by the explosion so the equipment could move into the area fairly well. In addition, most of the police cars were not near the fire so there was little congestion caused by police autos in that immediate vicinity. The evacuees had not left the general area so there was no traffic congestion from this source.

- 2) There was no special procedure required because the fires were gas based. The tremendous heat put out by the blazing gas did cause the first two buildings to catch fire. However, after that the fire fighting procedure required was no different from any situation where there is a large source fire endangering surrounding buildings.
- 3) A number of assistant chiefs and battalion commanders were notified to proceed to the scene. Problems of coordination seemed to be reduced by the presence of a number of high ranking fire department officials.
- 4) The department has two radio channels, one for officers and another for all other calls. Thus, there were few communication problems in calling the officers. In addition, the officers had walkie talkies which allowed them to talk to different units around the fire.
- 5) The total fire department contingent present was some 45 companies and approximately 300 men. Units came from the boroughs of Manhattan and Brooklyn, as well as Queens where the fire was located. However, the later assignments, especially the one from Manhattan was more for the

purpose of providing relief for men already on duty rather than because of a worsening of the fire situation. There were more than enough men present to do all the work necessary.

6) There seemed to be no untoward problems for the fire department. The mobilization of men and the activation of equipment followed organizational routine. However, there was some difficulty caused by the fact that the area in which the fire occurred is not served by the city water system. This meant smaller pipes and less than adequate pressure. Hose lines had to be laid out several blocks in order to hook up to the city water mains. The number of men needed to do this is one reason why such a large assignment was called out. As mentioned previously, this stringing out of men and equipment also cut down on the amount of congestion in the area vis-a-vis the amount of equipment sent to the fire.

7) One very minor modification was made in the coverage assignments. For example, several Brooklyn units that would ordinarily go to sections of Queens to cover the Queens' companies areas when they were out did not do so. It was felt that they were already close enough to Queens and that Brooklyn needed them to cover for the companies that had gone from Brooklyn on the third and fifth alarm assignments from that borough.

The Gas Utility Company  
(Brooklyn Union Gas Company)

The company received a call from the police department at 5:15 a.m. about the smell of gas in the area. One minute after receiving that call, a customer

called the company with the same complaint. A service crew of two men was sent to the address. This type of crew is equipped for investigating and taking care of small leaks related to customer installations and low pressure connections. When they arrived at the scene at about 5:25 a. m., they realized that the leak was beyond their capacity to handle. They called by radio for a distribution crew to be sent out. This type of crew has the knowledge and equipment to deal with high pressure, general distribution line problems.

The service crew's truck had stalled as had the fire trucks and this truck was burned when the fire started some five minutes later. At about this same time, the central control panel in the company's main offices showed a drop in pressure. This automatically set off an alarm. The person on duty put more gas into the system to keep the pressure up and alerted crews on duty that there was a leak somewhere. The engineer proceeded to trace it down from his instruments. At about this time also the first distribution crew arrived, saw the type of leak it was, and put out a call for all available crews to come to the area. The first holder truck arrived at 6:00 a. m., the first street truck arrived at 6:10 a. m.

The men from the gas company proceeded to start to turn off the gas. However, the gas could not be turned off all at once and at one point. This particular line -- a medium pressure distribution line -- has 19 spurs branching off. The spurs must be shut off first. If this is not done, the gas could back up into the spurs with high pressure and cause another blow out or the fire could back up into the pipe. The crews started their work about two blocks away and moved along their lines toward the fire. The flame was diminished by 7:10 a. m., was

quite small by 8:00 a. m., and the plug was replaced at about 9:20 a. m. Normal service was back to the area by Friday evening.

Observations on the gas utility:

- 1) The gas company stated that they have no knowledge of any other occasion when such a plug has developed a leak anywhere in the country. It is considered a permanent installation and thus is not routinely inspected. Since this incident, they said that obviously they will have to inspect all such installations. The cause of the development of the leak is not known.
- 2) Some gas company personnel called their main office through telephone equipment. (The telephone crews were out repairing the damage to their lines.) The main reasons for these calls were to keep officers and public information personnel of the company informed of developments. In turn, information could be given to the mass media and to pipeline companies that were calling from all over the United States. There are large distribution lines in Queens of other companies and apparently these companies were concerned to see if their lines were involved.
- 3) Consolidated Edison Company based in Manhattan because of its communications tie in with the police and fire departments, sent crews to the area. The foremen of these crews went to the foremen of the Brooklyn Gas Company crews offering their assistance. The two companies often work together and officials of the two companies know each other well. However, there did not appear to have been any great need for the Consolidated Edison help, even though use was made of the crews sent.

4) Although the utility company personnel were under unusual time pressure, the work that they were doing was of a type engaged in routinely. That is, no new procedures, no different equipment was required. They just needed more personnel to do the same kind of emergency work, faster.

Other observations:

1) The involvement of the New York Civil Defense unit was minimal. They offered some equipment such as cots and other articles. As far as could be ascertained these offers were rejected. Some Civil Defense auxiliary fire volunteers, who normally are at some station houses in the evening, were present at the fire. It may be noted that these people are seen by fire department personnel more as "fire buffs" than as members of the civil defense organization.

In answer to specific inquiries about CD activity in the fire, several members of different organizations knew of nothing that CD had done in regard to the fire and further, regarded them as rather inactive in general, in the city right now.

2) As DRC has found in other disasters, the mass media exaggerated the extent of the disaster. This was done both in terms of the amount of damage done as well as people displaced, and the number of men and equipment present at the fire.

3) The police department seemed to have had no major problems in the disaster. They utilized their normal emergency plans and procedures, and reported no difficulties. In general, this was a fairly routine emergency for them.

4) As had been initially suspected by DRC, the disaster was not of the magnitude inferred by the mass media coverage. It was not of a magnitude so as to seriously disrupt the community. Nor did it seem to induce pressures on the involved organizations that their established procedures and resources could not handle.

Insofar as the questions involved in sending the DRC team in the first place are concerned, the following in summary can be said. The evacuation was not as rapid or as smooth as had been implied by the mass media. The convergence of much equipment and manpower did not present as much of a problem as was initially assumed. The gas company handled the emergency in a relatively routine fashion. This report has attempted in a gross way to document these points.

From the viewpoint of DRC, the incident does not warrant any further study or examination.