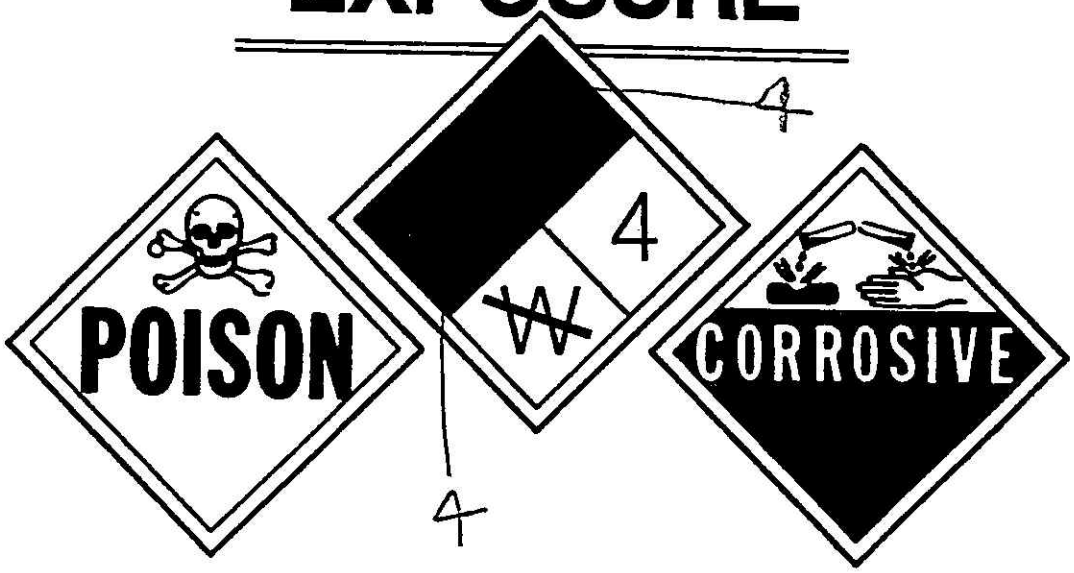
EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE



Alvin C. Bronstein
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The Mississauga Disaster

BY ANDY ZIELINSKI

As virtually everyone in emergency services knows, 11.56 pm on Saturday, November 10, 1979 marked the start of the biggest evacuation in the history of North America.

By the time it was over, six hospitals, as well as a number of nursing homes, were evacuated; some 210,000 people were removed from an area covering 250 sq. km; emergency and volunteer personnel from a distance of several hundred kilometres had been brought in, often with their equipment. As a result, emergency personnel and equipment for additional hundreds of kilometres in radius were affected by the ripple effect.

Because of the sheer magnitude of the Mississauga Disaster, and because it affected every conceivable area of emergency procedures, it will be studied and analyzed for years to come. As one of the people intimately involved put it: "There has never been such a large scale test of emergency procedures, and the lessons learned from it will undoubtedly affect emergency personnel's plans and procedures for generations to come."

It is worthwhile to concentrate on the role played by the various ambulance services involved and on how the procedures that had been established prior to the incident worked - or failed to work - and what lessons can be adapted by ambulance services throughout Canada and the rest of the world. It is also important to give a time sequence of the most important events.

At about 6 minutes before midnight on November 10, 1979, the emergency switchboard at the Metro Ambulance Service in Toronto, as well as the emergency switchboards at the Peel Regional Police Headquarters in Brampton and many other emergency phone numbers, began receiving calls from citizens regarding a huge fire in the West End of suburban Toronto. Over the next five or six minutes, the area of the fire was pinpointed as South of the Queen Elizabeth Highway, in the general area of Highway 10.

Even before this, a number of Metro ambulances were already being staged in readiness for a move to assist in what was obviously going to be a major problem in Mississauga. Within several minutes of the first call, the problem was identified as a train wreck and an explosion, and this brought a sigh of relief, because some of the calls suggested that the explosion could have been nuclear.

By 23:59, the Mississauga General Hospital had been notified, and at the same time, Metro Ambulance received a request for two ambulances to deal with possible victims. At 00:07, the Metro Ambulance duty officer set out for the scene, and at 00:13, additional units were dispatched. At 00:19, another hospital was warned, and John Dean, General Manager of the Municipality of Metropolitan Toronto Ambulance Services, was contacted, and departed for the scene. At 00:29, all senior staff were on their way.

At the same time, the same procedure was under way to bring in police, fire and other emergency personnel and equipment, and additional hospitals were also notified. Shortly before 1 a.m. it was realized that there was a chemical factory in the immediate vicinity of the fire, and at the same time, the derailed train's manifest disclosed that some of the cars contained chlorine, while the major reason for the fire was probably the exploding propane tank cars.

With this combination of chemicals being established, the possibility of evacuation became apparent. As a matter of

fact, the preliminary order for evacuation, involving a 1-km radius from the scene of the derailment, was issued by Peel Regional Police at about 00:30. In subsequent hours, the area of evacuation was extended to 5 km, and chemical experts were notified to come to the scene and give professional advice.

At 06:41, the Mississauga General Hospital was warned to prepare for a possible evacuation. At 07:44, the decision to evacuate, with the first units departing with patients at 09:25. Some four hours later, 262 of the 450 patients were sent home, and the remaining 188 had been delivered to a number of hospitals outside of the threatened area.

Unfortunately, however, some of the early evacuees were moved to the Queensway General Hospital which, it soon became apparent, would also have to be evacuated, as the imminent danger of the chlorine gas began to affect an ever greater area, so this hospital had to be evacuated later in the day.

By the time the last hospital evacuation was completed, 1,129 hospital patients had been removed and 655 were released. In addition, many residents of nursing homes had to be transferred. The last evacuations were completed by approximately 04:30 on the morning of November 12th.

During this same period of time, the entire operation was coordinated from a Command Centre which was established within an hour of the incident. Partly because the true nature of the problem was not realized, the Centre had to be moved several times because it appeared that the shifting wind might expose it to the deadly fumes. In any case, within the first hour, the entire procedure was being directed by Chief Burrows, who headed a team of top emergency experts and specialized consultants operating on a 'think tank' concept.

The Peel Regional Police had, over the ten years prior to this incident, developed an emergency services plan which was designed to enable a coordinated effort to take place involving ambulance, police, fire, Red Cross, St. John's Ambulance and many other emergency-oriented organizations under a unified command, with central control, to facilitate a number of independent organizations working together without tripping over each other.

Metropolitan Toronto Ambulance personnel and wheelchair fleet

Photo courtesy Toronto Sun

Several previous incidents, involving the Texaco Refinery fire and a Malton Airport DC9 crash, tested some of these procedures, so at least the fundamental approach was in place.

It is worthy of note that it was the presence of the Malton Airport in the Peel Region that was originally responsible for the development of an emergency plan. It is also interesting that some lessons were learned, and changes in the plan were made, as a result of the Chicago DC10 crash earlier in the same year.

Once the scope of the disaster became apparent, established routines went into effect and emergency personnel and equipment from a progressively wider area were brought in to render assistance. As soon as they arrived on the scene, they were immediately informed of the chain of command and the procedures that were in effect. As a result of this, independent action was not taken, although key personnel were brought into the 'think tank' to contribute to the command decisions.

A specific example of this would be John Dean's pointing out that hospital evacuation would have to be considered. Once this became apparent, he outlined what the ambulance personnel's problems would be, while at the same time, hospital personnel pointed out what problems they would face. Simultaneously, the police officers responsible for traffic control would have their input regarding evacuation. This method of operation carried on until all areas of hospital evacuation had been covered, and all anticipated problems were solved.

Obviously, however, all problems were not aniticipated. As mentioned earlier, for example, the early evacuation from the Mississauga General involved patient transfer to Queensway before it was realized that Queensway itself could, and probably would be subject to evacuation, so it was only somewhat later that the leap-frogging of the more adjacent hospitals was begun.

Another unanticipated problem regarding hospital evacuation was based on a decision made in the 'think tank'. Hospital personnel readily agreed that a number of patients could safely be discharged, and when they were asked to contact their next of kin to come and pick them up, a traffic jam developed. On the one hand, ambulances were lining up to receive transfer patients; on the other hand, relatives were leaving their parked cars to find the patients being discharged. As soon as this became apparent, traffic officers were positioned to direct the pickup of discharged patients from the side door, while the ambulances were left free access to main and emergency doors.

Another problem - this one partially anticipated - involved the drivers of ambulances from other areas. Although they were fully familiar with the location of the hospitals in their vicinity, they had no knowledge of the same in the Mississauga, Brampton and Peel regions. This problem was solved by sending the ambulances out in convoys, so that the drivers unfamiliar with the roads could follow local units.

Again, it was only because of the 'think tank' approach that this worked, but there were other benefits from both this approach and the plan. Intensive care patients, for example, could not be randomly transferred, but could only be transferred to those

hospitals which had adequate facilities. To do this, a major communications setup had to be set up, and here again, the 'think tank' and outside expert approach proved invaluable.

Within a matter of an hour or so, Bell Telephone personnel were at the Command Centre, and immediately found a nearby telephone facility to which lines could quickly be tied, enabling personnel to contact the hospitals and get an accurate estimate of the facilities available throughout the region. The same telecommunications centre proved invaluable in another extremely important phase of the operation.

Because the problem involved extremely toxic chlorine gas, detailed weather information became critical to the decisions which would have to be made.

At the time of the first explosion, a southerly wind blew the toxic gases south over Lake Ontario, preventing what could have been a massive death toll even before the first emergency units could have arrived on the scene, and before the first steps to evacuation could have been taken. A telecommunications tie-in, involving Environment Canada and a number of its weather stations, was immediately established, and several weathermen were brought to the scene to monitor on a minute-by-minute basis the wind conditions. As soon as a possible wind shift was indicated, ambulances were sent into the affected region, and using their sirens and PA systems, cruised the residential streets informing the residents of the order to evacuate.

As the weathermen continued to send up their ballons, and as the impact of the size of the gas spill became apparent, these ambulances continued warning residents further and further away from the blast scene. At the same time, the communications centre was able to coordinate the positioning of traffic control, to eliminate what could have been massive traffic jams. Later, of course, the ambulances were brought back to assist in the evacuation, and here again, the centralized communications system was invaluable.

It is now time to turn to the role played by the ambulance personnel. Starting with the dispatch of the first Metro Ambulances within minutes of the disaster, 139 ambulance units from 27 ambulance services were brought in to the Peel region, and the last of these, primarily from the Mississauga region, was still on duty on November 13th. In addition, a number of buses and other emergency service units were brought in to assist with the evacuation of mobile patients and to serve as stand-by.

After the original calls, the ambulance personnel were prepared to face a casualty situation of incredible proportions. Staff-Inspector Barry V. King, the Executive Officer of Peel Regional Police Force, stated that except for the ideal wind conditions, anything up to 25,000 casualties could have been encountered within minutes of the derailment and explosion. As it was, this was not the case, but the ambulances, nevertheless, rendered invaluable service in the first hours by serving as mobile PA systems, while driving down hundreds of miles of residential streets.

Several people involved in the Command Centre said that the problem of warning people in such a way had not been thought of, but again, the 'think tank' approach, with ambulance personnel in attendance, rapidly pointed out that this was a function which could be performed by ambulances, especially since there were no immediate casualties.

Once this task was performed, the large number of ambulances present on the scene made it possible to evacuate hospital, nursing home and extended care patients in the unbelievably low total time of 17.6 hours. This figure is all the more remarkable because many patients had to be moved in what was essentially an intensive care environment, involving an attending physician and/or nurses, as well as life-sustaining equipment.

Probably the best way to explain how successful this was would be to say that not a single death could be traced to the evacuation and subsequent return. The youngest patient was not even an hour old, and the eldest was over 100 years of age.

According to everyone concerned, the job performed by the ambulance personnel was exemplary, and the relative positioning of the ambulance experts within the 'think tank' and the services placed within the emergency plan proved well thought out and entirely adequate to cope with whatever the effects of the disaster might have been.

As John Dean pointed out, had the original casualties been massive, additional problems would have occurred, if only because of the shock of having to deal with a great number of deaths and injuries.

"The psychological impact of a massive disaster on emergency personnel will undoubtly affect their efficiency, but the mere fact that we were able to bring in such a large number of units and coordinate them successfully shows that even with a large body count, this system will work."

He gave a specific example: "At one stage during the hospital evacuation, there was the possibility of a wind shift. Ambulance and hospital personnel knew that should this shift take place, ambulance personnel would have to leave, even if it meant leaving patients and hospital personnel to their own resources. Hospital personnel knew that certain rudimentary protection could be provided, but that the ambulances would have to be removed to deal with future casualties. A dead ambulance crew can help no-one."

As part of this contingency planning, ambulance units, and especially those close to the scene

of the disaster, were left running and pointed in the direction of retreat. The reason for this was made eminently clear by the chemical experts in the 'think tank'. Chlorine is heavier than air, and therefore creeps along the ground. If it comes close to an engine, it will exclude air from the carburator, stalling it. Again, since ambulances are priceless in a disaster situation, a quick method of retrieving them to safety had to be considered.

This is not to say that all of the eventualities were covered, and John Dean gave a couple of examples of things that did not work, and will therefore have to be considered in what will be the new emergency plan.

Once the evacuation was ordered, all businesses were shut down, and yet the emergency vehicles continued to burn fuel. Within a matter of hours, a gasoline shortage developed. Fortunately, an oil company could be contacted and several tanker trucks were brought in. Obviously, this will now form a part of the new plan.

Once a large number of ambulances are mobilized to the scene of a disaster, a sequential plan for re-supplying them with medical supplies goes into effect. In this particular case, there was no need to re-supply the ambulances, because the supplies were not being used, but re-supply vehicles continued arriving, so another modification will be that additional supplies will not be brought in until and unless they are required.

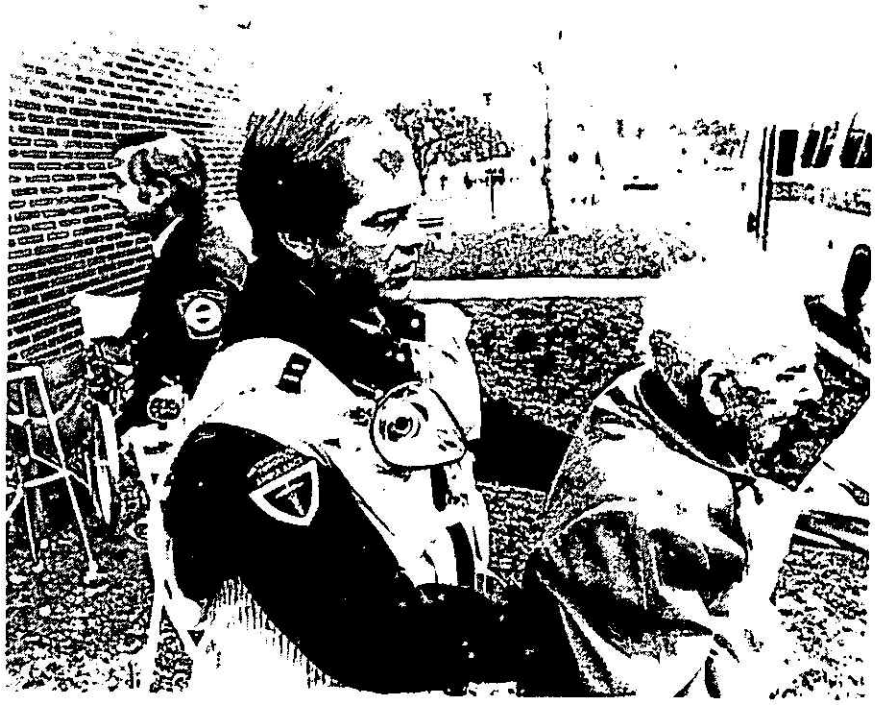
In the midst of the entire evacuaton, plans for dealing with the evacuees, as well as fire and police personnel, were established. Unfortunately, however, no-one expected the ambulances to be on duty for 36 hours or more. Since ambulance personnel must remain with their vehicles, most of them wound up going hungry. As a result of this, John Dean has set up a food pack that will now be an integral part of every ambulance's equipment. The pack contains styrofoam cups and some cans of prepared food, so that the units can be self-sustaining for at least a day or so.

A more difficult problem presented itself with crew rotations. Ambulances that arrived from out of town had no extra personnel, and some arrangements regarding crew rotation will have to be developed.

Other problems became apparent, but according to Dean, considering the scale of the operation, very few things were not planned for, and while lessons can always be learned and procedures can always be made more efficient, he was satisfied that the emergency plan and its tie-in to the

ambulance service functioned remarkably well.

He gives another instance of this efficiency: "Some time during the second day, I was speaking to my superior, and I told him what I thought was the amount of money that our department had spent so far. His comment: 'Carry on'."



Gently, gently 'till we're through
Photo courtesy Toronto Sun

One generation helps another
Photo courtesy Toronto Sun

Because of the unified approach of dealing with a problem and then worrying about the details later, the Metro Ambulance Service spent something like $100,000 without worrying about bureaucracy or invoicing. According to Dean, the total ambulance cost was probably something in the region of $250,000 but because it was part of a plan, it was possible to go ahead and spend the money without having to concern oneself with what are essentially political and fiscal problems. As he said, "Any other approach would have resulted in a shutdown because of bureaucracy alone."

According to Staff Inspector Barry King, the Mississauga disaster provided an unparalled opportunity for emergency services of all kinds to see how well they can work together under extreme conditions. As a result, meticulous records have been developed, and are currently being collated and analyzed. When this is completed, there will be a seminar which will be available to emergency personnel from all over the world, in the hope that the lessons learned in Mississauga will be put to use by other emergency organizations.

Inspector King hopes that this will lead to the establishment of workable emergency plans in all major urban centres, and that it will result in some new procedures being established regarding dealing with various emergencies.

He gave one example.

"As soon as it became apparent that we were dealing with a poisonous gas, we sent out a call for gas masks, because we knew that we didn't have enough. First of all, it took far too long for some of the masks to come in, but more importantly, we realized that there are no set standards which define what type of gas mask is efficient in which situation. This is one specific thing which we know we are going to be dealing with - and of course, there are many others."

In summary, probably the best way to assess the Mississauga disaster would be in these words. A combination of chlorine and propane in a derailment could have killed thousands of people. The absolutely ideal location - i.e., in a relatively unpopulated but readily accessible area, with good roads - minimized the possibility of a large number of instant casualties. Had the derailment taken place even a mile on either side, the casualties would have been certain. The prevailing wind, blowing the original fumes over the lake, was nothing short of a miracle.

The fact that the accident occurred in an area which had a workable emergency plan eliminated incredible confusing and thereby eliminated certain accidents which occur when confusion abounds. The accident occurred at night, on a weekend, when traffic was at a minimum and most people were at home, eliminated panic and traffic jams. The existence of the framework for a Command Centre, and the unified approach, enabled Chief Burrows and his staff to deal with the problem and anticipate most eventualities.

The lessons learned by all emergency services should result in major changes in the approach to a major disaster. No-one could possibly have learned these lessons in an exercise, and it is imperative that they not be forgotten. It is safe to say that an opportunity to learn these will never again come as cheaply. Above everything else, ambulance services can take pride in the fact that they were able to play such a vital role in this incredible occurrence. ■

An Editorial

Emergency well handled

Everyone involved in coping with the Mississauga emergency deserves the highest praise.

Firemen who fought the blaze, close to a potentially lethal source of poison gas; police who kept curiosity-seekers out of the area, kept traffic routes open for emergency vehicles, warned residents of evacuation plans, and supervised the evacuation; civil defence and other authorities who found emergency shelter and food; private companies which delivered bread, meat and other foods voluntarily; the print and broadcast media which kept people informed of the rapidly-changing emergency without creating panic; the civil authorities, mayors and reeves, and many others, and particularly the man in charge, Attorney-General Roy McMurtry, who had to make a great many fast, tough decisions; and most of all, the people of Mississauga, who closed their homes and left the area for the most part calmly and in good order, accepting the inconvenience of a blanket on a schoolroom floor with good grace all contributed to evacuating almost a quarter of a million people in a few hours.

It was a good show all around. The House of Commons motion which commended municipal and regional forces was most appropriate. - **London Evening Free Press** ■

OTTAWA, Ont.
A seat belt use campaign under a "STEP" (Selective Traffic Enforcement Program) committee has proven successful, and an observed 80% of area drivers are now complying with the belt use laws. Enforcement will continue to maintain or even surpass the 80% figure. The Ottawa-Carleton area is now believed to have the highest recorded seat belt usage rate in North America.

Day-by-day drama that paralyzed a city - and fascinated the world

The Mississauga Crisis

THE HAMILTON SPECTATOR

A potential death train rumbled towards Toronto through the city of Mississauga late on the night of Nov. 10th, 1979. Suddenly the peaceful evening was shattered when the freight derailed.

The rending and tearing of metal was a prelude to the largest evacuation in Canadian history as more than 224,000 people were taken from their homes. Within 28 hours the city became a ghost town.

For the rest of the week, the eyes of the world were on Mississauga - waiting, expecting something to happen. Miraculously nobody was injured, and there was no looting when the houses and apartments were evacuated.

The events of the week would make the perfect ingredients for a book or movie. But to the thousands of families whose lives were disrupted, the crisis was all too real. This is a diary of what happened.

Saturday

The 106-car Canadian Pacific freight, carrying tank cars filled with highly explosive and poisonous chemicals, including chlorine and propane, rolls through Mississauga unnoticed until the tracks intersect with Mavis Road.

Five minutes after passing a residential area, a bearing overheats and the train derails at 11:56 p.m. Eleven tank cars loaded with propane explode upon impact and seconds later the sky is filled with flames and dense smoke.

Three miles away the first fire call is received at the Fairview Road fire station. At 11:57 the dispatcher calls for every available piece of firefighting equipment in the city and starts an emergency plan for use in such circumstances. He begins calling every other off-duty fireman and emergency agencies from a list of phone numbers.

It is 11:59 and nobody is fully aware of the danger. None of the emergency people know that a tank car, carrying 90 tons of liquid chlorine, a deadly gas that was used in World War I battlefields, lies on the track with flames shooting all around it.

Sunday

Trainman Larry Krupa, 27, dashes into the flames and explosions at 12 midnight to detach 27 upright cars, most of them loaded with propane - so engineer Keith Pruss can haul them safely away.

By 12:05 a.m., Peel Regional Police and firemen are racing to the scene.

At 12:06 the first police radio report to headquarters asks for additional help and every available member of the force is called to duty within 30 minutes. Calls for help go out to the Ontario Provincial Police and the Royal Canadian Mounted Police.

Peel Regional Police chief Doug Burrows and deputy chief William Teggart learn the full impact of what has happened and at 12:08 establish a mobile command station a quarter of a mile away from the derailment.

Crewmen tell investigating officers of the dangerous cargo and at 12:10 police start going door-to-door evacuating 10,000 nearby residents.

The dispatcher at the Mississauga fire department follows the disaster plan and at 12:40 calls in additional help from the Etobicoke fire department. Fifteen men, two pumper trucks and two ladder trucks are sent.

Etobicoke fire chief Bryan Mitchell arrives on the scene at 1 a.m. and takes command until Mississauga chief Gordon Bentley arrives.

Police and fire officials meet at 1:30 and decide that Chief Burrows will command the operation while Mr. Bentley with the assistance from Mr. Mitchell co-ordinates the firefighting aspect. At the meeting the police chief decides to evacuate thousands of residents who live south of the accident site.

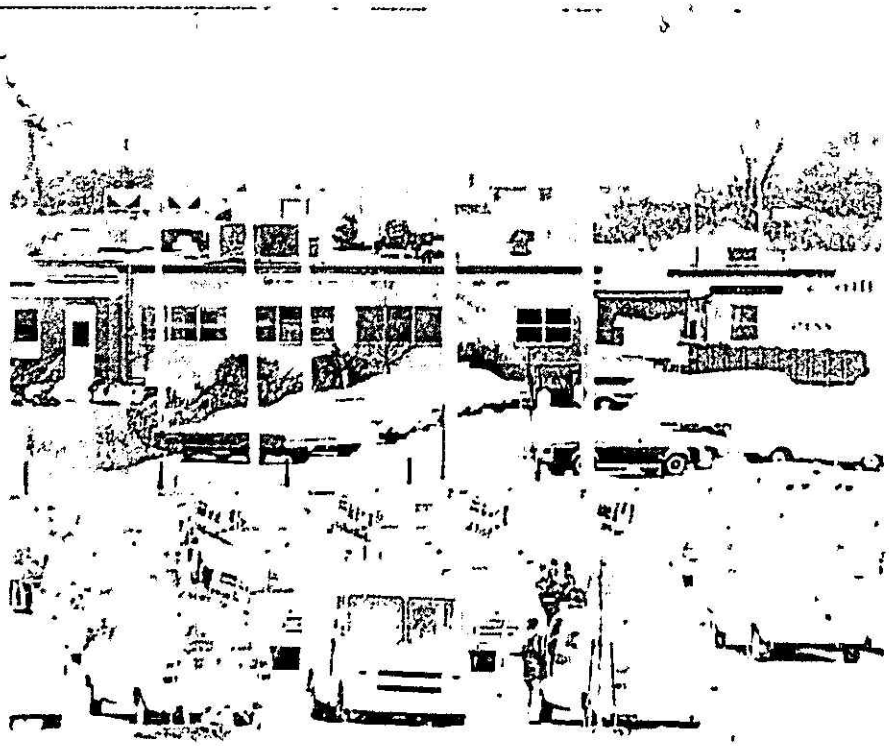
Chief Bentley calls Niagara Falls at 2 a.m. to request help from the Transportation Emergency Assistance Program, an agency established to inform fire departments on how to handle chemical fires. A team of experts is sent immediately.

John Okumura and Earl Walters, two experts in chemical fires with the Gulf Canada refinery's engineering group are called at 2:05 by the Mississauga fire department's dispatcher.

At 2:15 Ontario's provincial ambulance co-ordination centre calls in all off-duty ambulance attendents living in Toronto to help with the evacuation.

Hey fellow, what's the hold-up?

Photo courtesy Toronto Sun



Hospital evacuation worked smoothly

Photo courtesy Toronto Sun

Mr. Okumura and Mr. Walters arrive and meet with disaster command at 2:30 to work on a way to keep flames away from the tank car carrying the deadly chlorine.

Concern grows over the safety of area residents, and fire and police officials meet at 2:45 to discuss the possibility of calling in the army.

TEAP, along with Canadian Industries Ltd., follow the Chlorine Emergency Plan, designed by the industry for accidents involving chlorine. The parties meet with firemen and Gulf chiefs at 3 a.m. to discuss firefighting and chemical protection procedures.

At 3:40 the Transportation of Dangerous Goods Information and Emergency Centre in Ottawa is alerted by TEAP of the possible holocaust in Mississauga.

Ten minutes later the Ministry of Transport at Toronto International Airport answers a request from Chief Bently for a foam tender.

More propane tank cars explode at 4 a.m., adding more fuel to the fire, and that starts the second wave of evacuations. Thousands more people are asked to leave their homes.

By 4:50 evacuation efforts are in full gear, with families being sent mainly to the Square One shopping centre.

At 6 a.m. firefighters have been battling the blaze for six hours and are starting to get it under control. They work on a "controlled burn" and keep their hoses on the chlorine tank car.

The command post is forced to move at 7 a.m. because of the heat and chlorine fumes. The new location is the Central police station at Dundas Street and Highway 10.

The evacuation of 175 of 462 patients at Mississauga General Hospital is started at 9:35. Ambulances and transit buses transfer patients to other area hospitals. Other patients, judged healthy enough, are discharged, go home or are sent to the temporary shelters.

At 9:50 the wind starts to blow and the fear of the fire spreading to the chlorine increases. Command centre increases the evacuation boundaries and requests for more ambulances are sent as far away as London and Kingston. The command also decides that hospitals, senior citizens' homes and nursing homes will be evacuated.

The evacuation of Queensway Hospital begins at 10:45 while a similar plan is already well under way at Mississauga General.

When the wind picks up, the command decides the danger is to great for the people at Square One, located two miles northeast of the accident site. Evacuation of the shopping centre starts at 12:10 p.m. and 7,000 people are taken to Sherway Gardens shopping centre in Etobicoke.

At 1 p.m., two chemical experts from Sarnia's Dow Chemical Company, the owners of the chlorine gas, arrive in an OPP chartered plane with equipment to monitor air conditions.

The results and the wind conditions force Chief Burrows to evacuate more people at 1:35. People from the area bounded by the Credit River, on the west, Burnhamthorpe Road on the north, Cawthra Road on the east, and Lakeshore Road on the south, are asked to join 20,000 other refugees.

Winds keep increasing from a calm three kilometres an hour to 13 kilometres and the command agrees at 1:40 that 100,000 more people have to be evacuated.

One hour later, Highways 5, 7 and the Queen Elizabeth Way in Mississauga are closed except for emergency vehicles.

The sixth evacuation since the derailment, takes place at 3:40 when the boundaries are increased from Lakeshore Road along to Highway 122 on the west, and Burnhamthorpe Road to the north along Dixie Road.

At 8:30 the Peel Board of Education announces that Mississauga schools will be closed.

Oakville Trafalgar Hospital gets word at 11 p.m. to start evacuation procedures.

Monday

Mississauga Mayor Hazel McCallion at 12:30 orders, everyone with a business, home, factory, or job to stay away from the city today.

Chief Burrows puts the western portion of Metro Toronto and Hamilton on "alert" at 1:30 in case the chlorine tanker should explode.

By 4 a.m. 224,000 residents have been evacuated and the city is virtually empty except for emergency personnel.

Procor Ltd., the company that made the tank cars, receives an order at 9 a.m. to construct a steel patch to repair the leak in the chlorine car.

Only one propane tanker is burning at 3:20 but escaping gas freezes in the cold air and crystallizes.

Tuesday

Central command, politicians and Dow Chemical staff hold a press conference at 10 a.m. and announce 70 percent of the much feared chlorine was blown into the sky on the first explosion.

Large tanker cars arrive with a crane to clean up damaged propane cars and contents at 1 p.m.

At 5 p.m. at least 150,000 people are allowed to return home.

But an unlucky group of almost 75,000 are told to stay away from a 50-square-kilometre swath in the middle of Mississauga for at least one more night until the site of the derailment is cleared of deadly gases.

Police, fire chiefs and chemical workers decide unanimously to keep the one section sealed.

Wednesday

Attempts to seal the leak in the chlorine tank car are postponed at 9:44 a.m. because workers at the site are exhausted.

A large puff of white vapor (a mixture of water and chlorine which turns into hydrochloric acid) emanates from the leaky chlorine tanker at 12:22 p.m. Eight firemen inhale hydrochloric fumes and are rushed to hospital.

The wind changes once more at 4:12 p.m. and blows traces of chlorine gas towards Toronto.

Workers again try to repair the hole in the tanker with a patch, at 4:20, but the uneven edges of the rip pose a major problem.

Central command begins at 5 p.m. to search for hotel accommodations for the 75,000 people still evacuated and most evacuees spend the night in a real bed.

(Continued next Page)

(Continued from Page 21)

Thursday

At 7 a.m., 103 hours after the ordeal started, central command fears chlorine gas may engulf Mississauga and considers re-evacuating the area. The concentration of gas is .06 per million, making it uncomfortable to breathe but not hazardous.

Many of the 75,000 people still evacuated from the 16-square-mile area become impatient with the ordeal and at 8 a.m. try to return to their homes and are turned back by police.

The risk that significant amounts of dangerous chlorine could burst from the derailed tank car increases at 2 p.m. keeping at least 75,000 people from their homes a fifth night.

There are now fears that a layer of ice 15 to 30 centimetres thick that has formed inside the tank may collapse, increasing the possibility of large amounts of chlorine escaping though a gash in the wrecked tanker that has been lightly covered with a temporary patch.

Crews start to pump chlorine from the tanker at 10:30 p.m.

Friday

Chlorine is still being pumped at 9 a.m. and an X-ray machine has been called to the site to determine exactly how much chlorine remains in the tanker.

About 56,000 evacuees were given the go-ahead to return home at 3:04 p.m. but 33,000 must spend a sixth night away from home as workers continue to drain deadly chlorine from a derailed tank car.

The remainder of the evacuees were given the go-ahead to return to their homes at 7 p.m., ending the largest and longest evacuation in North American history.

Chris clings to earring

A Concord, N.H., firefighter is battling for his right to wear an earring.

Chris Pope, a 22-year-old paramedic, was suspended with pay when he showed up for work wearing an earring. He was told to take it off or face a 30-day suspension without pay.

Pope later showed up for work without the earring, but said he's checking the situation with his lawyer and the union.

A union spokesman said no safety violation has been proved and there is no department rule against wearing jewelry on the job. But a fire department official said the issue is one of having firefighters give a professional appearance in their attire.