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Workers not told second chemical released by fire

By VICTOR MALAREK

Traces in laboratory tests have shown that one of the deadliest commercial chemicals was released into the air in downtown Toronto during a fire in an underground hydro transformer nearly two months ago.

An Ontario Environment Ministry official said yesterday that his "gut reaction" was that there would be no significant risk to health.

The chemical, dioxin, was found in low concentrations during a laboratory analysis of air and soot taken from the scene of the fire.

Dioxin occurs in trace forms in some herbicides and pesticides and was used as a defoliant by U.S. forces during the Vietnam War.

Ministry officials have not told the more than 60 Metro firefighters and Toronto Hydro workers who were at the fire about the discovery, which was made in mid-December.

The worrisome property of dioxin, which is 500 times as poisonous as strychnine, is that it can be absorbed through the skin. Firefighters and hydro work crews also were exposed to another toxic chemical called polychlorinated biphenyls (PCBs), but were unaware of any dangers associated with exposure to it until five days after the fire.

Both groups are being monitored for possible health effects. Several hydro workers have complained to their union about becoming ill after the fire. Symptoms included headache, eye discharges and irritation, nausea, vomiting and skin rashes similar to cold sores about the face and hands.

Some scientists regard dioxin as being more dangerous than the radioactive waste, plutonium. Amounts too small to be visible are deadly. Its residues have been found in medical studies to pass through the skin and accumulate in fat and liver cells. Clinical symptoms associated with exposure to the chemical include kidney and liver damage, ulceration of the stomach, and hemorrhages of the gastrointestinal tract and other organs. It also can cause birth defects.

Environment Ministry officials have been reluctant to discuss the presence of dioxin in their test results since they were first approached by The Globe and Mail on Wednesday.

Information officer William Dodds refused to release data on the subject until the ministers could be fully briefed on Thursday afternoon. Late yesterday, Environment Minister George McCague said he had been briefed on the fire but not on the dioxin aspect of it. An assistant deputy minister later called to ask that publication be delayed for a week.

Mr. McCague, who was not minister when the fire occurred, said yesterday he would investigate why the hydro workers or firefighters about the dioxin. Mr. McCague then referred a reporter to John Barr, assistant deputy minister for the ministry's regional operations and laboratories branch, for further information on the chemical.

Mr. Barr acknowledged

Chemical is released

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that "the presence of dioxin was found in the analysis" carried out at the ministry's labs. He would not, however, say how much was found. "I can't tell you the levels other than to say that we've shown a presence."

Mr. Barr said the information has not been made public because the ministry is still compiling the data on the analysis. "It involves a dangerous complicated testing procedure. We have some data, but it has to be looked at very closely because of the significance of this. It takes expertise and time. We also need advice in terms of interpretation and the medical significance."

Mr. Barr said the interpretative analysis should be completed and made public by next week.

He explained that dioxin is a byproduct in the manufacture of PCBs. "They have been shown to be released when PCBs are heated." The PCBs were released when a Hydro transformer burned. They were in a coolant circulating in the transformer.

Dioxin came rudely to public attention on July 10, 1976, when an explosion in a chemical factory in Seveso, Italy, released four pounds of the substance into the air — far more than the traces found would indicate was released in Toronto. A thousand people were ordered out of that town and nearby villages. About 250 women in their first trimester of pregnancy applied for abortions. They were given special sanction from the Pope. The Seveso population is being observed for long-term effects.

Donald Lee, a chemist employed by the British Ministry of Agriculture in London, is one of Britain's experts on dioxin. He also is Patient B in an article published in 1975 in the British Journal of Industrial Medicine. The article tells of how he and two of his scientific colleagues became victims of dioxin while they were engaged in an investigation of the substance for the Agriculture Ministry.

Mr. Lee explained that he and his colleagues made only milligram quantities of dioxin. After about five or six weeks, Mr. Lee noticed "an excessive oiliness of the skin, first affecting the nose and then spreading to the lower part of the cheeks and then to the neck" as if the skin "were smeared with melted butter." Two or three weeks later, he developed the ugly symptoms of chloracne, a skin disease associated with exposure. Huge blackheads developed all over his face and neck. His assistant developed chloracne, but received less exposure.

Under treatment, the chloracne gradually disappeared after a year, only to be replaced with other troublesome symptoms: continual stomach upset, bowel disturbances, loss of weight, bad headaches and loss of vigor and drive, plus "episodes of uncharacteristic anger." Concurrently, the chemist began growing long, coarse black hairs on his shoulders, back, eyebrows and hands, while the hair on his head began thinning.

Dr. Rodney May, assistant deputy minister of occupational health and safety for the Ontario Labor Ministry, said yesterday he had not been informed by Environment Ministry officials that concentrations of dioxin had been discovered in an analysis of samples taken at the fire scene. "If it was found and they didn't tell us, I'd be surprised."

Dr. May said he would look into it. His division is monitoring all workers who may have been exposed to PCBs during the blaze.

Developments in the aftermath of the Adelaide Street fire were plagued by wrong information, confusion and a breakdown in communications on the part of Environment Ministry and Toronto Hydro officials, which included:

Not warning firemen and Hydro workers about the dangers of PCBs before they read about it in the newspaper.

Toronto Hydro's failure to have a contingency plan for handling PCB-laden transformer fires. Hydro officials said later there was no contingency plan because they thought such a fire would not happen.

Failure by the ministry to test the air in the high-rise office building for PCBs that vaporized during the fire until The Globe and Mail questioned whether it had been done. Air sampling equipment was installed in the building the next morning — six days after the fire.

At the height of the controversy surrounding the ministry's handling of the fire, then-Environment Minister George Kerr told the Ontario Legislature that he would study the possibility of laying charges against Toronto Hydro for its delay of several hours in notifying the Government of a major PCB release during the fire.

His successor said yesterday that the ministry will not be laying any charges. "Nothing will be gained by laying charges," Mr. McCague said.

"The gain has been in fact through the press. The whole matter has been brought to a lot of people's attention. It served us in developing strategy for future incidents," he said.

New chemical traces from fire site found

Traces of a third dangerous chemical have been identified as a byproduct of the Adelaide Street Toronto Hydro transformer fire on Dec. 9.

An Environment Ministry spokesman said yesterday polychlorinated dibenzofurans were present in soot samples. PCBs and dioxins had been previously identified. The PCDF is regarded as being less toxic than dioxins but more worrisome than PCBs.

The latest chemical does not appear to pose a health danger to those exposed at the Adelaide Street fire, an occupational health official with the provincial Labor Ministry said.

Many of those at the fire were subjected to medical tests after the announcement that PCBs were released. Levels of a deadly commercial chemical released into the air in downtown Toronto during the fire pose no undue health risk, according to the Labor Ministry.

Yesterday, Dennis Nagata, an information officer with the ministry, said dioxin has not been positively identified. "The position of the ministry is we have not ruled out the possibility that dioxins may have been present in very low levels at the fire scene."