Union Carbide and the Devastation of Bhopal

by Russell Mokhiber

The Multinational Monitor, Volume 8, Number 4, 1987

http://multinationalmonitor.org/hyper/issues/1987/04/index.html

At 2:30 a.m, on December 3, 1984, 40 tons of deadly gases spewed from the Union Carbide India Ltd. (UCIL) plant in Bhopal, India. In the next several hours thousands died, hundreds of thousands were injured and both UCIL and its U.S. parent company, Union Carbide, attempted damage control.

Praful Bidwai, a chemical engineer and journalist, described the situation three days later at a hospital in Bhopal, a city of 800,000. "No one is counting numbers any longer," Bidwai said. "People are dying like flies. They are brought in, their chests heaving violently, their limbs trembling, their eyes blinking from photophobia. It will kill them in a few hours - more usually minutes."

"It" was methyl isocyanate (MIC), a toxic chemical used at UCIL's factory in Bhopal to manufacture pesticides. UCIL was 50.9 percent owned by Union Carbide Corporation, the Danbury, Connecticut-based multinational. The MIC production facility at the Bhopal plant had been shut down for two months, but on the night of December 2, workers conducting routine maintenance noticed a leak. At 12:30 a.m. on December 3, the ground around one of the MIC storage tanks began to rumble. Water had entered the tank, triggering a chain reaction that created heat and pressure and led to the release of 40 tons of toxic gases into the atmosphere over Bhopal.

The release of gas from the Union Carbide plant killed from 2,000 to 5,000 people by conservative estimates, and injured another 200,000 people, at least 30,000 to 40,000 of them seriously, making it the world's worst industrial disaster.

Many of the severely injured suffer from respiratory ailments, permanent eye problems, and mental disorders. Medico Friend Circle, a Bhopal-based citizen's group, conducted a survey in 1985 which found that rates of spontaneous abortions were higher among women who conceived shortly after the gas disaster.

On December 4, the day after the gassing, former Union Carbide Chairman, Warren Anderson, accompanied by other company officials, flew from the United States to India to personally inspect the disaster. Upon arrival in the Bhopal area, Anderson and two local Union Carbide officials were arrested and charged with criminal negligence. Six hours after their arrest, the three were released, ordered to pay $2,000 bail, and Anderson was ordered to leave the country, which he planned to do in any event. The charges, an attempt by the Indian government to quell

public outrage at the corporation and at the government - which was widely perceived as ineffective in bringing medical relief to the victims, were never pursued. Upon returning to the United States, Anderson told reporters that the purpose of his trip to India was to provide medical aid and seek information on the cause of the accident. But Carbide's offer of $1 million in disaster relief came to about $5 per victim, and the week after the accident, Carbide sent only one shipment of medicine, sufficient for 300 to 400 people.

Perhaps the more important reason Anderson went to India was to see that the company wouldn't be dragged into a costly legal battle. Anderson had good reasons for wanting to avoid litigation. Even though Union Carbide repeatedly claimed that the company was not at fault and that "the Indian company has nothing to do with the U.S. company," the facts point to a close and structured relationship between the two companies. While the Bhopal plant was operated by UCIL, it was controlled by Union Carbide's U.S. management.

The UCIL plant in Bhopal was storing MIC, a highly volatile and deadly gas. Although the plant had a refrigeration unit which was designed to keep the MIC storage tank at a temperature low enough to prevent a runaway chemical reaction, the unit was not working at the time of the accident. The MIC in the storage tank therefore was warmer than allowed by the plant's operating manual. "The refrigeration unit had been down over five months," Union Carbide officials admitted to a crowded March 20, 1985 press conference at Carbide's world headquarters in Danbury, Connecticut. The shutdown was a violation of plant procedure rules.

With the refrigeration unit out, it was crucial that instruments designed to measure the temperature and pressure of the gas in the storage tank be in good operating order. But the Temperature Indicator Alarm had been giving faulty readings for years. The Pressure Indicator Control was similarly faulty.

The plant also had an emergency scrubber system to neutralize gas in the event of a leak. But the scrubber system had been out of use for six weeks. The flare tower, designed as the final line of defense to burn off excess MIC, also was closed down 10 days before the fatal leak. Due to neglected maintenance, the line to the flare tower had corroded.

To make matters worse, the workers operating this faulty equipment at the Bhopal plant were inadequately trained. The leak was apparently triggered when an untrained worker attempted to wash a pipe that was not sealed. It was the mixture of water and gas that triggered the chemical reaction and caused the gas leak.

"Everything that could possibly go wrong had gone wrong," said Bruce Agnew, editor of *Safety and Risk Management*, the magazine of the British Safety Council. "Machinery failed; workers panicked; managers either took no decisions or took the wrong decisions."

If the cases against UCIL and Union Carbide ever go to trial, either in the United States or India, the evidence indicating reckless operation of the Bhopal plant could mean a verdict that would quickly deplete the assets of UCIL, estimated at $100 million. As half owner of UCIL, the loss of the Bhopal plant's assets is of concern to the parent, Union Carbide. Of much greater concern to Carbide, however, is the threat of losing its own assets. If a judge makes a legal determination

that Union Carbide exercised control over its Indian subsidiary, then Carbide's entire net worth is open to the claims of the victims. And the evidence condemning Carbide on this point is convincing. The structure of Union Carbide's relations with its subsidiaries indicates strict authority and control by the parent company. UCIIL is listed on Union Carbide's consolidated balance sheet. Through its majority holding, Union Carbide had direct representation on the board of UCIL.

More importantly, Union Carbide was directly involved in the design and operation of the Bhopal plant. According to a report on December 27, 1984 in the *Times of India* by chemical engineer and investigative reporter Praful Bidwai, Union Carbide designed the Bhopal plant and was responsible for approving and inspecting all major equipment installed in the factory. The Bhopal plant was "grossly underdesigned," according to Bidwai.

"Thus even if each piece of equipment had functioned as designed and the plant as a whole had been properly maintained and operated - which it evidently was not - it would still not have been possible to avert the disaster," Bidwai concluded.

In February, 1985, Edward Munoz, a retired Union Carbide , official and former managing director of UCIL, claimed in a sworn affidavit that in the early 1970s Union Carbide insisted that large amounts of MIC be stored in Bhopal despite UCIL's objection. In the early 1970s, Munoz "represented the Union Carbide India Ltd. position that only token storage (of the chemical at Bhopal) was necessary, preferably in small individual containers, based both on economic and safety considerations," according to the affidavit. But Union Carbide's corporate engineering group "imposed the view and ultimately made to be built (at Bhopal) large bulk storage tanks patterned on similar Union Carbide facilities at Institute, W. Va.," Munoz asserted in his affidavit.

In the wake of the Bhopal disaster, a growing chorus of critics joined Munoz in disputing Union Carbide's view that "the Indian company (UCIL) has nothing to do with the U.S. company." A wideranging, seven-week investigation of the Bhopal disaster conducted by the *New York Times* in January, 1985 concluded that Union Carbide "had the authority to exercise financial and technical control over its affiliate (UCIL) and the American parent used that right."

"Union Carbide had its finger on the pulse of the Bhopal plant all the time," Kamal K. Pareek, senior project engineer during the building of the Bhopal plant's methyl isocyanate installation, told The *New York Times*. "They just didn't appreciate the information they were getting."

An internal Union Carbide report supports this view. Dated May 1982, the report, submitted to Union Carbide by a team of American experts, points out major safety concerns at the Bhopal plant, including deficiencies in instrumentation and safety valves, lax maintenance procedures, and high turnover of operating and maintenance staff. The report, stamped "Business Confidential," warned that the plant presented "serious potential for sizeable releases of toxic materials." The U.S. team made numerous recommendations to rectify the deficiencies at the plant, but according to reports from union activists, not one of the recommendations was ever implemented.

After this report was sent from Union Carbide corporate headquarters to the Bhopal plant, union organizers appealed to U.S. management to improve safety conditions.

There were other warnings. Three months prior to the Bhopal gas leak, an internal Union Carbide memo warned that "a real potential for a serious incident exists" at Bhopal's sister plant in Institute, West Virginia, and that efforts to control the problem "would not be timely or effective enough to prevent catastrophic failure of the [storage] tank." The memo warned of a "runaway reaction" at the West Virginia facility.

Union Carbide's culpability in the Bhopal gas leak is compounded by a history of serious accidents at the Bhopal plant. Between 1978 and 1984, there were six accidents at the plant that should have tipped off corporate executives at world headquarters in the United States that something was wrong in India. On November 24, 1978 a fire at the alpha-napthol storage area burned out of control for 10 hours, resulting in $5 million in property damage. Plant operator Mohammed Ashraf was killed by a phosgene gas leak on December 26, 1981. Another phosgene leak in January 1982 seriously injured 28 persons. Three electrical operators were severely burned while working on a control system panel on April 22, 1982. On October 5, 1982, methyl isocyanate escaped from a broken valve and seriously injured four workers. Several people living in nearby communities also experienced burning in the eyes and breathing trouble due to the exposure. Two similar incidents were also reported in 1983.

Despite the number of serious accidents at the UCIL plant, few Bhopal residents knew that pesticides were being produced at the factory nor did they know of MIC's dangers. Even after the leak, Carbide took two hours to warn Bhopal's residents, many of whom lived in shanty towns surrounding the plant. The leak occurred about 12:30 a.m. on December 3, but the first alarm failed to warn most Bhopal residents until between 2:00 and 2:30 a.m.

"If they had [sounded the sirens] before or just after the gas leaked out, we would have known what to do," said one survivor. "We'd at least have had a chance to run. I lost my !i wife and two sons only because they didn't warn us. These people are criminals, butchers, worse than murderers."

Immediately after the accident, UCIL officials in Bhopal denied that MIC was hazardous. "The gas that leaked is only an irritant, it is not fatal," one UCIL official told reporters I immediately after the leak, but the MIC operating manual used at the Bhopal plant and adapted from a similar manual used at Bhopal's sister MIC plant in Institute, West Virginia tells another story. The authors of the manual, five Indian engineers, make abundantly clear the dangers of MIC: "MIC's limited exposure can be fatal. The chemicals involved in its production are highly toxic and hazardous in nature. Even the big corporations have refrained from making this lethal chemical due to the complexity involved in the operation."

Immediately following the Bhopal disaster, lawsuits were filed across the United States against Union Carbide on behalf of the victims and the government of India. But on May 12, 1986, Federal Judge John F. Keenan ruled that the lawsuits belonged not in the United States, but in India. The judge concluded that it would be more convenient and save U.S. taxpayer's money to have the Bhopal cases tried in India. That decision was appealed by lawyers for the victims.

In the year preceding his decision, Judge Keenan, in his words, "labored long and hard" to promote a settlement, all "to no avail." Indeed, Robert Hager, a lawyer representing 20 religious and public interest groups, argued, in appealing the judge's decision, that the Bhopal victims had been "seriously prejudiced because Judge Keenan labored for a settlement too hard and too long." Arguing that "Carbide and its powerful Wall Street owners stood to lose probably S5 billion or more if the Bhopal case reached an American jury," Hager reasoned that "Carbide had to settle the case cheap, hide its assets, or get the case out of the U.S. courts to avoid or at least postpone potential bankruptcy."

Hager charged that by permitting a year-long delay before making his decision, Judge Keenan allowed Union Carbide the time to liquidate substantial assets and make extraordinary payouts to its shareholders reducing its equity available to pay for any judgment awarded the Bhopal victims. The payouts reduced equity from around $5 billion before the disaster to less than $700 million on the books by the end of 1985.

"Carbide's depleted equity will now enable it to defend by means of bankruptcy, against any Indian judgment substantially in excess of its settlement offer ($350 million) without significant loss to the company's pre-Bhopal owners," Hager said.

Hager's appeal was denied and the case against Union Carbide is slowly proceeding through the Indian courts.

Union Carbide	
Sales	**$9 billion**
Assets	**$10.5 billion**
Net Income	**$581 million**
Employees	**91,459**
Rank in Sales	**39**
headquarters	**Danbury, CT**
CEO	**Robert D. Kennedy**
Products	**Prestone Antifreeze, Eveready Batteries, Gald Plastic Wrap**