

3. DOW ENVIRONMENTAL LIABILITY OVERVIEW

This section outlines major potential liabilities concerning contamination, remediation, and tort litigation facing the company which were not reported or were under-reported in Dow Chemical Corporations 10Ks for 2002 and 2003.

DOW AND BHOPAL, INDIA

“Companies that don’t meet their responsibilities to all their constituencies will have a difficult time. Responsible customers won’t want to buy their products...Enlightened communities won’t want them as neighbors, and wise investors won’t entrust them with their economic futures” (Dow's Chairman and CEO, William Stavropoulos , The Business of Business Managing Corporate Social Responsibility: What Business Leaders are Saying and Doing 2002-2007).

The Meaning of Bhopal for Investors

The 1984 Bhopal disaster involving a catastrophic failure at a Union Carbide pesticide manufacturing plant represents a serious problem for Dow with the potential to damage the company’s reputation. Over 14,000 deaths, and 50,000+ permanent injuries have been attributed to the event and its aftermath by Indian government officials. It has been the source of ongoing legal battles in both India and the U.S. This section will cover the existing and potential financial and reputational impacts for Dow related to the Bhopal disaster as well as a general overview of the ongoing events and controversies.

While Dow claims that it has no responsibility for the incident and that it is a tragic event of the past, investors should be concerned about current developments and the possible financial ramifications that could result. Key issues include:

- **Union Carbide’s Status in India:** Dow’s subsidiary, Union Carbide, has been listed as an “absconder from justice” by the Chief Bhopal Magistrate for failing to appear before the court on criminal charges relating to the disaster. Likewise, an extradition order has been issued by the Indian government¹ for Warren Anderson, former-CEO of Union Carbide at the time of the accident, so that he may face criminal charges as well. Efforts are underway to summon Dow to deliver Union Carbide to appear in the criminal case and to have Dow clean up the Bhopal site.² While Union Carbide no longer has a presence in India, Dow does. Its current holdings¹ registered in India³ include:

ⁱ When asked about the size of its holdings in India, the company stated that the above companies were “minor holdings” and that it did not disclose information regarding the valuation of individual subsidiaries.

- Dow Chemical (India) Holdings Private Limited held by Dow Chemical Pacific
- Dow Chemical International Pvt. Ltd.
- Anabond Essex India Private Limited held by the Mortell Company (50%)
- Dow Polymers Pvt. Ltd
- DE Nocil Crop Protection Ltd (Joint venture)
- Dow Corning India P Ltd Dow Corning Singapore Pvt. Ltd, Singapore
- **India's Increased Economic Importance:** India is a growing player in the globalized chemical industry and opportunity costs could be sizable for Dow if it is constrained in such a large and growing market by the “*substantial legal risk*” that Dow says exists regarding Bhopal. The Indian economy is projected to grow by 7.2% in 2004.⁴ It boasts the world's 12th largest chemical industry in terms of production, which is valued at Rs 1200 Billion (\$26 bn) and has been growing at twice the rate of Asia's overall chemical market since 1998.⁵ **In the late 1990's India became a net exporter of chemicals.**⁶ Agribusiness is an important consumer of Dow's products and India's agricultural sector is projected to grow 13.8% in 2004.⁷ Dow currently reports that it has 12% of revenues from Asia while only 2% of fixed assets there. This implies that for Dow to increase its market share in India it may have to acquire more fixed assets in the country and therefore increase its exposure to potential liabilities from Bhopal.

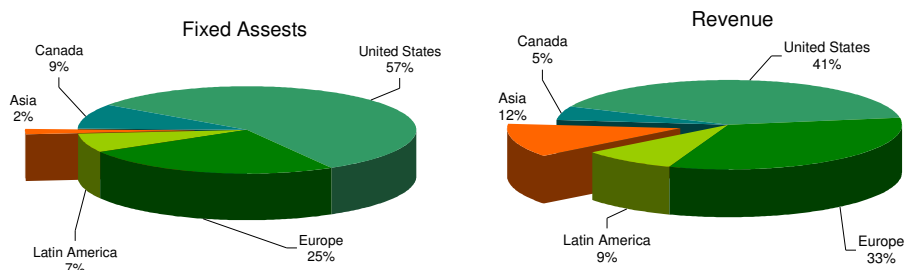


Figure 1. Breakdown of Dow's Fixed Assets and Revenue by Region
 (Source: William S. Stravropoulos, Chairman and CEO, Dow Chemical, Presentation to Morgan Stanley Conference, Feb. 24,2004)

- **Bhopal as a long-term issue:** Many serious points of contention remain between the survivors and Dow despite the funds from the civil case (\$470 million). An estimated Rs 1500 crores (approx. \$340 million) remains undistributed in the Bhopal compensation fund.⁸ The balance of the amount remaining in the fund is committed to compensation of victims, and cannot be used for the many other needs of the community, such as the public health and economic impacts resulting from the disaster, or for remediation of the contamination left behind by Union Carbide. Ongoing issues include remediation of water pollution alleged to be from the site, cleanup of

the site itself,⁹ and further social support for widows, orphans, and the many thousands who are unable to work as a result of injuries. Given this, it seems likely that legal challenges and controversies will continue regardless of the outcomes of individual cases.

- Potential for Divestment: Bhopal creates the real potential for escalating exclusions against Dow Chemical by money managers who run portfolios screened for social responsibility. In 2003 a study showed that there is now over \$2.18 Trillion under SRI management.¹⁰ Corporate directors can no longer ignore this level of investment. The issue is gaining a higher profile and will likely begin to affect investment decisions among this expanding group of investors.
- Regulatory Trends: Recent events in India involving pesticides (including Dow product: chlorpyrifos) in soft drinks has led to demands for greater regulatory oversight of water quality and other aspects of environmental quality. India's economic growth and combined with renewed concern over pollution may provide the necessary funds and motivation to institute more effective environmental cleanup and monitoring laws which would affect both the status of the Bhopal site and Dow's operations in general.

For investors to put Bhopal into perspective it is important to recognize one important factor – Bhopal is not just a synonym for industrial disaster, it is a leading test case for what is alleged to be wrong with the lack of corporate social accountability in the globalized economy. The actions of Union Carbide, and now Dow, are perceived worldwide as those of foreign investors more concerned about damage control than about the hundreds of thousands of human lives their operations have destroyed.

When Dow acquired Union Carbide's shares in February of 2001, it stated that *"the company conducted an exhaustive assessment to ensure that there was absolutely **no outstanding liability** in relation to Bhopal. There was none; the company that Dow acquired retained absolutely no responsibility for either the tragedy or for the Bhopal site."*¹¹

However, Dow states in its 2002 Global Public Report: *"We respect that for some people, responsibility for the Bhopal tragedy continues to be an unresolved issue. This doesn't change the facts that the Government of India, through the Settlement agreement, has full authority and responsibility over issues arising from the tragedy and that, upon acquiring Union Carbide, Dow inherited no responsibility. Still, some people would have us take action to resolve their concerns. **But, we are aware of potentially significant legal risks associated with such actions** and we will not compromise our obligation to protect our shareholder interests."* (Author emphasis.)

Thus, the company has stated that it cannot take additional action on Bhopal because of *"potentially significant legal risks"* but yet states that it does not have any responsibility or liability. This contradiction bears greater scrutiny by investors and thus a more detailed explanation of the nature of these risks warranted.

The management's reporting of the Bhopal case presents a number of apparent omissions, inaccuracies and contradictions that are misleading to investors. It implies that resolving outstanding concerns would raise significant legal risks. This amplifies the reality that the management is aware of outstanding risks related to Bhopal that are not being reported to shareholders, such as the fact that Union Carbide is considered an "absconder from justice" by the Bhopal magistrate.

The Bhopal Disaster

On the night of December 2-3, 1984 water leaked into a tank containing methyl isocyanate (MIC) at the Bhopal, India pesticide plant of Union Carbide India, Ltd. The resulting runaway reaction vaporized an estimated 30 to 40 tons of MIC releasing a massive toxic cloud of methyl isocyanate gas.^{ii, 12,13}

The cloud drifted across Bhopal, a city of some 900,000 residents at that time. The estimates of casualties vary somewhat depending on the source. However the dense slums that sprawled right up to the wall surrounding the plant meant that the Bhopal accident would have the highest death and injury rate of any industrial disaster yet recorded. The initial death toll was officially placed at 2,500 but other estimates based on the sale of shrouds and cremation wood begin at 7,000.¹⁴ The company that owned and ran the site, Union Carbide India Ltd., was a closely held company (50.9%) owned by the U.S. parent company, Union Carbide.

A little more than 16 years later, in February 2001, Dow Chemical acquired Union Carbide as a wholly owned subsidiary, purchasing 100% of its stock and consolidating its balance sheet. Dow Chemical management has gone to lengths to say that when it acquired Union Carbide it thoroughly investigated the matter and did not acquire with it any remaining liabilities with the stock purchase of the company. At the 2003 annual shareholder meeting, for instance, Dow Chemical CEO William S. Stavropoulos described Bhopal as a tragic bygone that is all but resolved in the courts, and for which the company is helpless to take any actions.

As a result of the acquisition, however, Dow has become an international target of protest and media scrutiny. The management's public denials of liability and responsibility are fueling the protest movement. Those denials may also prove to be misleading to investors in light of ongoing efforts to hold Union Carbide liable for criminal charges and environmental remediation and to link Dow with UCC in the Indian courts.

ⁱⁱ In addition, some reports suggest that hydrogen cyanide was also present. When methyl isocyanate is pyrolyzed at temperatures above 427°C hydrogen cyanide is formed as a breakdown product. Union Carbide denied that cyanide gas was present, likely because the health effects of cyanide gas are more well known than methyl iso-cyanate and the company wished to reduce any potential liability. Doctors treating victims found that treatments used for addressing cyanide exposure were effective and eye witnesses reported the smell of "rotten almonds." Cyanide has an almond like odor.

History of the Bhopal Case

In May of 1982, Union Carbide inspected its pesticide plant in Bhopal, India and found 10 major deficiencies.¹⁵ The facility had been losing money for two years already and in the four years before the accident it lost a total of \$4.5 million and the company was looking to sell it.¹⁶

Charges in the pending criminal litigation assert that Union Carbide was guilty of "culpable homicide not amounting to murder." Many issues of fault have been alleged, some of which place blame with the parent corporation rather than its Indian subsidiary. It is alleged that dangers found in safety audits of the Bhopal plant were not remedied, even though remedial measures for similar dangers were undertaken at Union Carbide's MIC plant in West Virginia.¹⁷

According to allegations made in various arenas regarding the events of December 2, 1984, water (that was being used for washing the lines) entered the tank containing MIC through leaking valves. The refrigeration unit, which should have kept the MIC close to zero degrees centigrade, was shut off by company officials to save on electricity bills.¹⁸ The entrance of water to the tank, full of MIC at ambient temperature triggered off an exothermic runaway reaction and consequently the release of the lethal gas mixture. The safety systems which, in any event were not designed adequately to control such a runaway situation, were awaiting repair. To avoid having the community be unduly alarmed due to occasional leaks, the siren in the factory had been switched off.¹⁹

In addition there are allegations that the parent company had underinvested in the technologies at the plant. According to representatives of Bhopal survivors, documents obtained through discovery in cases filed against Union Carbide show that in the early 1970's in response to the Indian government's efforts to promote import substitution through the dilution of foreign equity (The Foreign Exchange Regulatory Act – FERA) the company reduced its investment in the Bhopal plant from \$28 million to \$20.6 million. Despite reducing the total cost of investment in line with FERA, the company retained its 51% share in the UCIL subsidiary by back-integrating the equity formulation for the plant. Under FERA, this reformulation required the transfer of additional technology not currently available in India.²⁰ In order to prevent the dilution of its ownership Union Carbide transferred substandard technology, which had only had a limited test run because it lowered costs in addition to meeting, on paper at least, the requirements of FERA.²¹

According to Himanshu Rajan Sharma – the attorney representing the Bhopal plaintiffs against Dow in the District Court for the Southern District of New York, these documents also show that the pesticide production system at Bhopal had only a trial run and that Warren Anderson, then CEO, and the management committee of the Union Carbide Corporation made the key decision to transfer inferior technology to Bhopal.²² This would be especially significant as FERA stipulated that the technology transfer had to involve “state of the art” technology. Comparisons of the

Bhopal plant design and a plant owned by Union Carbide in West Virginia producing the same “Sevin” pesticide at the time allegedly show design differences between the plants.

In short, faced with losing majority ownership under FERA, it has been alleged that Union Carbide made the overall plant cheaper to build by importing inferior technology, thus putting Bhopal at risk from the plant’s inception.

Both civil and criminal cases were brought against Union Carbide and other parties including its Indian subsidiary, Union Carbide India Ltd. The civil case filed by the Indian government on behalf of the survivors was settled for \$470 million in 1989. While by the terms of the Indian Bhopal Gas Disaster Relief Act, the settlement resolves all claims of survivors for injuries resulting from the disaster, according to survivor’s organizations today the amount of the settlement was based on estimations that have proved far too low, whether quantifying the dead, the injured or the property lost. It also never accounted for future medical claims. As a result, say the survivors’ organizations, the \$470 million dollars has proved to be inadequate even to satisfy the claims of the acknowledged victims of the disaster. The balance of the amount (approx. \$340 million²³) remaining in the fund is committed to compensation of victims, and cannot be used for the many other needs of the community – not the public health and economic devastation resulting from the disaster, and not for remediation of the contamination left behind by Union Carbide.

In November 1994 Union Carbide sold its interest in Union Carbide India Limited (renamed Eveready Industries India Ltd. – or EIL) to MacLeod Russell (India) Ltd. of Calcutta. As a consequence of that sale, Union Carbide asserted that it retained no interest in or liability for the Bhopal site.ⁱⁱⁱ However, the Chief Judicial Magistrate for Bhopal has held that Union Carbide Corp.’s transfer of shares was not bona fide because it was done to evade potential liabilities arising out of the ongoing criminal case in Bhopal. As a result, \$74 million in Union Carbide assets were attached pending appearance of Union Carbide in the criminal case.^{iv}

Union Carbide has never filed an appearance in the criminal case, and asserts that the courts of India lack jurisdiction to make the company appear as a defendant.

ⁱⁱⁱ EIL took exclusive possession of the land under lease from the government of Madhya Pradesh.

^{iv} These assets have been since reallocated towards construction of a hospital for Bhopal. However, this asset transfer has not obviated the potential liability of Union Carbide in the criminal case.

Long Term Public Health Effects

Long –term mortality as a result of exposure to gas from the Bhopal site has been determined by the Indian government to be over 14,400. Other estimates by NGOs working in Bhopal are higher.

	Initial Deaths	Initial Injuries	Permanent Disabilities	Long-term Mortality
Indian Government – ICMR	2,500+		50,000	14,400+
Congressional Research Service	2000+	100,000	50,000	
Claims filed with Indian Government			600,000	16,000
NGO Estimates	7000-8000+			15,000-20,000

Figure 2. Bhopal Disaster Casualty Figures - Multiple Estimates

(Sources: Indian Center for Medical Research –ICMR, the U.S. Congressional Research Service, Lapiere D, Moro J. 2001²⁴)

Long term analysis of the Bhopal population and the events of the tragedy itself have yielded some alarming statistics. In Nov '89 the Deptment of Relief and Rehabilitation placed the death toll at over 6000. In December 1992 the official agency for monitoring exposure related deaths was closed. Studies showed that some areas experienced 150 times the normal mortality rate weeks after the disaster.²⁵ Data published by the Department of Relief and Rehabilitation in December 1998 shows that in the year 1997 the mortality rates were 10.4 out of 1000 in the gas-exposed population compared to 6.07 in the unexposed population. Based on an exposed population of 572,242 [ICMR's estimate] this works out to over 2000 deaths attributable to exposure in the year 1997 alone. Health effects stemming from methyl isocyanate exposure produced a number of long-term health effects which have been the impetus behind calls for UCC and Dow to further assist survivors.

Medical Studies²⁶ have shown a range of long-term impacts. Symptom prevalence surveys conducted by the ICMR²⁷ indicate that morbidity^v was higher in the exposed area (26%) as compared with the control area (18%) when assessed during the period November 1988 to March 1990. Results from the survey carried out by the International Medical Commission on Bhopal show that a large number of subjects reported general health problems (exposed 94% vs unexposed 52%) and episodes of fever (exposed 7.5 per year vs unexposed 2.5 per year). Respiratory, neurological, psychiatric and ophthalmic symptoms also showed a strong gradient by exposure category. Another study²⁸ found growth retardation in boys who were exposed as toddlers or were born to exposed parents. Major medical problems associated with gas exposure at Bhopal include **ocular problems** including a condition known as “Bhopal eye”^{29,30,31}; **Respiratory Toxicity**^{32, 33, 34}; **Reproductive toxicity**^{35, 36, 37}; **Genotoxicity**^{38, 39}; **Immunotoxicity**⁴⁰; **Psychological and Neuro-behavioural Impacts**^{41,42}; and **Neuromuscular Toxicity**^{43,44}.

^v Incidence of medical conditions.

After the Dow Chemical Acquisition of Union Carbide

Many investors may erroneously take at face value the management's statements that the company acquired no liability for Bhopal. For instance, on the company's web page regarding the Bhopal tragedy, Dow Chemical notes that when Dow acquired Union Carbide's shares in February of 2001, *"the company conducted an exhaustive assessment to ensure that there was absolutely no outstanding liability in relation to Bhopal. There was none; the company that Dow acquired retained absolutely no responsibility for either the tragedy or for the Bhopal site."* The company cites a number of issues and developments to back up this claim.⁴⁵

This statement is misleading, because as will be discussed further below, Union Carbide remains a named accused in the criminal case in India. Dow Chemical assets in India may be subject to attachment in the ongoing case. In addition, the Indian government is reportedly processing a request to sue Dow to engage in remediation of the site.

Union Carbide's Pending Criminal Charges in Bhopal

A criminal case was filed against 12 defendants, including Union Carbide, alleging the crime of "culpable homicide not amounting to murder."^{vi} As part of the Indian government's 1989 settlement, outstanding criminal liabilities against Union Carbide Corporation and other accused were quashed. However, India's Supreme Court reviewed this component of its order and reinstated criminal charges against all accused in 1991.⁴⁶

Indian courts are based on a British system of jurisprudence which means that penalties of restitution can be levied in criminal cases. In the case of the crimes that Union Carbide is charged with, there is no upper limit for the penalty amount. According to Indian lawyer S. Muralidhar, the penalty amount is left to the discretion of the Court, and usually depends upon the magnitude of the crime and the ability of the criminal to pay.

In 1992, the Chief Judicial Magistrate ordered that Union Carbide Corporation be proclaimed an absconder for repeatedly failing to honor summons to face trial. Thus, in India, Union Carbide is considered a criminal fugitive.

Dow continues to have a presence in India in the form of several subsidiaries and at least two joint ventures with assets and businesses. (See above.) The continuing presence of these assets, regardless of their size, may give the Indian courts some leverage to attempt to enforce the cooperation of the parent corporation Dow Chemical in producing its subsidiary Union Carbide in court.^{vii}

^{vi} Some of the Indian defendants have had their charges reduced to lesser charges of criminal negligence in the intervening years. However the charges against Union Carbide and former CEO Warren Anderson remain as culpable homicide.

^{vii} In addition, on February 26, 2004, the Bhopal court was petitioned by a group of Bhopal survivors (the Bhopal Group for Information and Action) to issue a summons to Dow Chemical to produce Union Carbide for the criminal case. In an initial hearing, the government prosecutors (CBI) took the position that such a procedure is

Toxic Wastes and Contaminated Groundwater

Union Carbide operated waste evaporation ponds on a 14 hectare (35 acres) plot 400 meters from the factory.⁴⁷ These ponds received toxic effluents. Such effluents were also discharged through an open drain flowing nearby. Several tons of obsolete pesticides and process wastes lie strewn around the factory site.

The environmental contamination of the site – much of it created prior to the chemical disaster – has rendered the city a dangerous place to live. Thousands of tons of toxic wastes, including obsolete pesticides such as the persistent and bio-accumulative poison HCH and persistent metals such as mercury, have been abandoned at the factory site.⁴⁸ Mercury levels in some areas are 6 million times the background values. The groundwater carries high loads of heavy metals, persistent chemicals and solvents, and chlorinated chemicals. Although a portion of the residents have access to overhead tanks of clean water, many of the nearly 20,000 people living in the vicinity are routinely exposed to these chemicals in their drinking water from local wells.⁴⁹

Numerous studies, including by Union Carbide itself, acknowledge the presence of contamination and toxic wastes on and off site. A 1999 Greenpeace study confirmed the presence of persistent organic pollutant chemicals, such as DDT and Lindane (as contamination) and hexachlorocyclohexane (as stockpiles) among others.⁵⁰

Though the factory was returned to the Madhya Pradesh state government in 1998, the condition in which the property was returned may violate the lease agreement. Members of the Indian government and survivor organizations assert that Union Carbide was bound under the terms of their site lease to return the land to the Indian government in usable and habitable condition. Instead, they say, the company undertook some cosmetic remediation work, which community residents assert did nothing to diminish the danger of contamination to local aquifers, before requesting local government departments to take back the lease. Though the government took the site back from Carbide, the Madhya Pradesh government is reportedly working to sue Dow as current owner of Union Carbide asserting a failure of the company to abide by the lease terms.⁵¹

Dow Chemical's management has declined any responsibility for cleanup of the toxic wastes stating, among other reasons, that the 1989 compensation settlement covers all liabilities. However, the Supreme Court order states that the settlement amount “. . . shall be made to the Union of India as claimant and for the benefit of all victims of the Bhopal Gas disaster under the Bhopal Gas Leak Disaster (Registration and Processing of Claims)

unavailable under Indian law, however at this writing the court had not yet decided for or against the application. Application to issue summons BEFORE THE COURT OF HON'BLE CHIEF JUDICIAL MAGISTRATE, BHOPAL IN THE MATTER OF CBI Prosecution Versus Warren Anderson & Others Accused, Bhopal Group for Information & Action [BGIA], Bhopal, Applicant, February 26, 2004.

Scheme, 1985...” The Bhopal Gas Leak Disaster Act, 1985, which describes the framework of the above mentioned scheme clearly refers to four kinds of claims that can be addressed using the settlement money. All these are claims “. . . arising out of, or connected with, the disaster.”

The toxic wastes, obsolete stockpiles and groundwater contamination were a result of the routine operation of the factory rather than primarily arising out of or connected with the disaster. Therefore, it appears that the liability for clean-up of the toxic wastes and remediation of contaminated groundwater were not necessarily extinguished by the 1989 settlement.

The courts of India have formally adopted a “polluter pays” principle, which requires that where possible, environmental contamination costs will be charged to the entities causing pollution. The Indian Supreme court has adopted this as a binding principle of law:

“... once the activity carried on is hazardous or inherently dangerous, the person carrying on such activity is liable to make good the loss caused to any other person by his activity irrespective of the fact whether he took reasonable care while carrying on his activity. The rule is premised upon the very nature of the activity carried on.”⁵²

Consequently, polluting industries are "absolutely liable to compensate for the harm caused by them to villagers in the affected area, to the soil and to the underground water and, hence, they are bound to take all necessary measures to remove sludge and other pollutants lying in the affected areas".

In the case of Vellore Citizens Forum the Indian Supreme court clarified further that the "Polluter Pays Principle" as interpreted by this Court means that the absolute liability for harm to the environment extends not only to compensate the victims of pollution but also the cost of restoring the environmental degradation. Remediation of the damaged environment is part of the process of "Sustainable Development" and as such the polluter is liable to pay the cost to the individual sufferers as well as the cost of reversing the damaged ecology.⁵³

By the Polluter Pays principle it may be expected that Union Carbide may ultimately be found to be at least one of the responsible parties.

In addition to activities in India, a class action suit brought by survivors against Union Carbide regarding environmental remediation is currently pending on appeal in New York, after having been resolved in favor of the company in the district court. The suit also seeks additional compensation for the long-term health damages that the plaintiffs assert to have not been addressed in the original Indian government settlement. An Amicus Brief filed by 18 Congressmen on behalf of the victims in response to the court's ruling stated, “*There is strong support in Congress for holding those responsible for this horrific tragedy accountable for their actions. It is unacceptable to allow an American company not only to exploit international borders and legal jurisdictions but also the ability to evade civil and criminal liability for environmental pollution and abuses committed overseas.*”⁵⁴

In March 2004, the Second Circuit Court of Appeals for New York issued an order allowing litigation by Indian property owners near the Bhopal plant to proceed against Union Carbide in the New York District Court for property damages, including environmental remediation of their properties. The case that is being allowed relates to contamination that is not from the gas disaster, but rather from the operation and abandonment of the plant site.

In addition, the Circuit Court left an opening for the District Court to allow litigation regarding remediation of the Bhopal plant site itself. The district court had denied the case for remediation of contamination of the UCIL site itself primarily because it would require cooperation of the government of Madyha Pradesh, which currently holds ownership of the site. The appeals court allowed that if the Madyha Pradesh government were to intervene in the N.Y. litigation, that aspect of the case could also be revived. The MP government has been looking for a mechanism by which to hold Union Carbide Corp. and Dow Chemical Co. responsible for remediation costs. Given that Union Carbide Corp. has denied the Indian government the ability to assert jurisdiction over the company in India, cooperation by the MP government in the New York case may be forthcoming, thus potentially reviving a large case for remediation of the plant site. It should also be noted that the recent Circuit Court decision provides an opening for personal injury cases related to the contamination to be pursued in the New York litigation, provided that they are not barred by the statute of limitations.⁵⁵

The decision also upheld the plaintiffs' right to seek medical monitoring from UCC for injuries and symptoms associated with groundwater contamination. UCC may be held liable for funding a medical monitoring program for the benefit of the exposed population of 20,000 persons.⁵⁶

Impact on Dow Chemical's Reputation

Aside from direct financial liabilities, investors should recognize the international significance and historical resonance of the Bhopal chemical disaster, and therefore its powerful effect on corporate reputation. Since the purchase of Union Carbide in 2001, Dow has been subjected to escalating public scrutiny and demands for action refocused from Union Carbide to Dow Chemical as the new parent corporation. These include:

- In 2001 and 2002, survivors of the Bhopal disaster and their representatives met with the management of Dow regarding its completed acquisition of Union Carbide. The discussion ended inconclusively after Dow Chemical's CEO was replaced.
- In a letter to Dow management of March 11, 2002, the survivors wrote in follow-up to conversations with the management requesting that the company address the needs of survivors which remain substantially unmet including clean up of the site and ground water, medical monitoring of survivors, further economic compensation and economic rehabilitation for those whose livelihoods are impaired by injury and social support for widows and orphaned children.

- Survivors appeared at the 2003 Dow Chemical shareholder meeting, where CEO William Stavropoulos repeatedly stated that there was nothing the company could do to answer the survivors' pleas for help – that the company had neither liability nor responsibility for the prior disaster nor its continuing after effects.
- In December 2003, the 19th anniversary of the Bhopal disaster, protests erupted at Dow facilities worldwide. This included the first organized student protest of Dow Chemical since Viet Nam on 25 American campuses. A total of 65 activities worldwide protested against Dow calling for “Justice for Bhopal.”
- A large coalition of organizations met in Bhopal in January 2004 and announced an escalating campaign against Dow in the coming months, to culminate in December 2004 with this year's 20th anniversary of the Bhopal disaster.⁵⁷
- On January 19, 2004, more than 500 people including Bhopal survivors, and representatives from Dow-impacted communities in Vietnam (Agent Orange) and Saginaw, Michigan demonstrated outside the Dow Chemical India headquarters in Chembur, Mumbai. An 8-member delegation, including an Agent Orange victim and a former parliamentarian from Belgium, presented a memorandum to Dow Chief Ravi Muthukrishnan. Among other things, the memo urged Dow to present itself to the court in the ongoing criminal proceedings in Bhopal.
- Eighteen members of Congress sent a letter to Dow management on July 18th, 2003 urging the company to provide medical rehabilitation and economic reparations for the victims of the tragedy, clean up contamination in and around the former factory site in Bhopal, provide alternative supplies of fresh water to the affected communities, and ensure that the Union Carbide Corporation appears before the Chief Judicial Magistrate's court in Bhopal where it faces criminal charges of culpable homicide. Similar declarations have also been proffered by 50+ parliamentarians in the UK.

In light of these developments, it is reasonable for investors analyzing the situation to determine that the Bhopal controversy will not go away on its own and indeed will always be a black mark on the company's record. Increased attention to Bhopal heightens the real potential that money managers who run portfolios that incorporate environmental and social analysis will screen out Dow stock. There is over \$2.18 trillion under socially responsible investment management.⁵⁸ The issue is gaining a higher profile as a result of continuing inaction by Union Carbide and Dow and will likely affect investment decisions among this group of investors.

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NEW DELHI: Registrar of Companies, 2nd Floor, B Block, Paryavaran Bhavan CGO Complex, Lodi Road, New Delhi 110 003
MUMBAI: Registrar of Companies, Maharashtra, Everest 100, Marine Drive, Mumbai 400 002 Tel: +91 22 22812639 fax: +91 22 22811977
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