Appendix D: Union Carbide Corporation
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References used in this section:


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Additional Readings:

Union Carbide Website: www.unioncarbide.com


Richard Ice, “Corporate publics and rhetorical strategies: The case of Union Carbide’s Bhopal Crisis,” Management Communications Quarterly 4/3: 341-362 (Feb 1991). [Probably overestimates how well Union Carbide did with some of the audiences, but has an interesting classification of audiences and analysis of how rhetoric that worked with some undermined efforts to persuade others.]
Organization Chart

Union Carbide Corporation, 1982

Headquarters (Danbury, CT)

Union Carbide Eastern (Hong Kong)

Union Carbide India Limited

other Asian affiliates

Agricultural Products Division

Battery Product Division

Carbon, Metals and Gasses Division

Chemicals and Plastics Division

Marine Products Division

Bhopal R&D

Calcutta R&D

**plant:**

**Bhopal**

plants: Calcutta, Hyderabad, Lucknow, Madras, Srinagar

**plant:**

Bombay

fishing and fish processing

1983 sales

<table>
<thead>
<tr>
<th>Division</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Products</td>
<td>Rs 173 million</td>
</tr>
<tr>
<td>Battery Product</td>
<td>Rs 1235 million</td>
</tr>
<tr>
<td>Carbon, Metals and</td>
<td>Rs 80 million</td>
</tr>
<tr>
<td>Gasses Division</td>
<td>Rs 454 million</td>
</tr>
<tr>
<td>Chemicals and Plastics</td>
<td>Rs 42 million</td>
</tr>
<tr>
<td>Marine Products Division</td>
<td></td>
</tr>
</tbody>
</table>

(UCIL also owned the Nepal Battery Company Limited, 1983 sales Rs 25 million)
Summary of 1982 Union Carbide Safety Survey of Bhopal Plant

Overall conclusion: “no situations involving immanent danger or requiring immediate correction” but situations present that do require attention and remediation.

10 conclusions are listed as particular concerns:

1.) Potential for gas leaks in phosgene/MIC production area
2.) Potential for gas leaks in MIC storage area
3.) Lack of fixed water-spray protection systems in several parts of the plant
4.) Potential for overfilling, excess pressure or contamination in MIC storage tanks
5.) Deficiencies (including leaks) in safety valves
6.) Malfunctioning pressure gauges
7.) Inadequate instrument maintenance programs
8.) Maintenance workers’ failures to insert slip blinds into pipes before starting water washing to clean filters
9.) Problems stemming from high personnel turnover, particularly in operations teams
10.) Lack of contingency plans for coping with serious leaks
Summary of 1985 Inspection of West Virginia Plant

In April 1986 the U.S. Occupational Safety and Health Administration (OSHA) proposed a $1.4 million fine against Union Carbide Corporation for their disregard of health and safety laws. The violations were publicized after a September 1985 inspection of five of 18 plant units at Institute, West Virginia alleged 221 violations of 55 health and safety laws. OSHA classified 72 of the 221 violations as "serious," meaning there was substantial probability of death or substantial physical harm.

An October 1985 New York Times article cited the "Willful" violations as:

1.) Negligently exposing six workers to toxic chemicals within the plant.

2.) Failure to follow standard company operating procedures in the storage and transfer of toxic chemicals, as well as company emergency procedures.

3.) Failure to provide an adequate number of respirators accessible to workers handling toxic chemicals.

Other violations included:

1.) An inadequately ventilated control room. Air conditioning equipment brought vapors into the control room.