

Bhopal Plant Disaster Case Contents

Revised March 3, 2008

1.) Case Study: Situation Summary

2.) Appendices: These provide specific information and may be used selectively by each instructor, depending on his or her emphasis in the use of the case. The appendices provide the technical details for an in-depth analysis of Bhopal as well as additional references both for the instructors and the students.

Appendix A: Chronology

- 1.) Bhopal Chronology
- 2.) Ensuing Litigation Chronology

Appendix B: Stakeholders and Level of Responsibility

- 1.) H-O-T Analysis of Industrial Accidents Applied to Bhopal Gas Leak
- 2.) Stakeholder Orientations in Industrial Disasters Table
- 3.) Stakeholder Effects and Responses Table
- 4.) Comparison of Features of MIC plants in West Virginia and Bhopal
- 5.) Exercise: Identifying Responsibilities

Appendix C: Economic/industrial climate of India

- 1.) India's Approach to Economic Development
- 2.) Chemical Industries in India, summer 1984
- 3.) Excerpts from and Comments on Union of India Foreign Exchange Regulation Act 1973
- 4.) Government of India, Planning Commission, 4th Five-Year Plan
- 5.) Government of India Tenth Five Year Plan: 2002-07 [for comparison of current to prior policy orientations]

Appendix D: Union Carbide Corporation

- 1.) UCC Organization Chart
- 2.) Summary of 1982 Union Carbide Safety Survey of Bhopal Plant
- 3.) Summary of 1985 Inspection of West Virginia Plant

Appendix E: Issues in Chemical Processing

- 1.) Toxicity of Chemicals present in the Bhopal Plant
- 2.) [Fragmentary] Notes on Making SEVIN
- 3.) Types of Hazard in Manufacture and Use of Industrial Products Chart
- 4.) Types of Hazard in Product Use/Consumption Chart

Appendix F: Assessing Responsibility: The Legal/Regulatory System

Topic 1: Litigation

- 1.1) Note on Indian Supreme Court Decisions regarding Bhopal Gas Disaster, MJ Peterson

Topic 2: On Policy Changes Inspired by Bhopal Disaster

- 2.1) Western European Policy on Information about Chemical Plant Hazards, 1982 [excerpt from Josee van Eijndhoven, "Disaster prevention in Europe" in Sheila Jasenoff ed, *Learning from Disaster: Risk Management after Bhopal*(Philadelphia: University of Pennsylvania Press, 1994) pp. 113-132]
- 2.2) United States Policy on Information about Chemical Plant Hazards, 1987- [excerpt from Susan G. Hadden, "Citizen Participation in Environmental Policy Making" in Sheila Jasenoff ed, *Learning from Disaster: Risk Management after Bhopal* (Philadelphia: University of Pennsylvania Press, 1994), pp. 91-112.]

Appendix G: Assessing Responsibility: The Engineers and Scientists

- 1.) Contrasting Views of Responsibility for the Bhopal Disaster

Appendix H: Assessing Responsibility: Technical Expertise and Managers

- 1.) Engineers and Managers

3.) Additional Recommended Readings for Students:

B. Bowonder, Jeanne X. Kasperson and Roger E. Kasperson, "Avoiding future Bhopals," *Environment* 27/ 7 pp. 6-37 (Sept 1985).

Ronald J. Willey, Dennis C. Hendershot, and Scott Berger, "The Accident in Bhopal: Observations 20 Years Later," *Process Safety Progress* 26/3 pp. 180-184 (Sept. 2007).