

*Loading the DICE: A Five-country Study of Vinyl Chloride Regulation*, by J.L. Badaracco, Harvard Business School Press, Boston, MA 02163, 1985, ISBN 0-317-19560-3, 208 pages, \$ 19.95.

In 1974, the report that vinyl chloride monomer (VCM) was implicated as a human carcinogen touched off a frantic search for adequate control not crippling to the plastic industry. This book by a Harvard Business School professor, reviews the processes by which U.S., U.K., West Germany, France and Japan approached the task.

In the U.S. where 9 VCM producers supplied 20 PVC producers, the Occupational Safety and Health Administration set an emergency standard. On April 5, 1974, the OSHA issued an emergency temporary standard for exposure of 50 ppm; in October 1974 the final exposure standard of 1 ppm with a ceiling of 5 ppm averaged over any period not exceeding 15 minutes was issued. In between these dates, on May 10, 1974, the OSHA proposed "no detectable level" as determined by sampling and analytical levels capable of detecting 1 ppm VCM. The "no detectable" triggered a chain reaction by the industry that developed into a serious, even bitter adverse relationship. Even well-informed and well-meaning persons who testified "pro bono publico" for professional organizations such as the American Chemical Society were discredited. By April 1975, the U.S. industry had complied with the final standard.

The approach to the VCM problem in the U.K. (2 producers), France (3), and West Germany (6) differs greatly from both the U.S. and Japanese efforts. In the three European countries, quangos (quasi-autonomous non-government organizations) played important roles in the government/industry discussions and eventual resolution. In Japan, the 18 producers used a hybrid of institutional arrangements and operating policies developed in the U.S. and European cases. Business and government cooperated directly without a quango. In Japan, as well as in Europe, relatively informal instruments of administrative guidance evolved in contrast to the formal regulations in the U.S. In all five countries, the ultimate goal of small single digit exposures was achieved; in France the final order was issued in 1980, giving industry time to engineer the necessary modifications of processes and practices.

The book compares the U.S. adversary route versus the cooperative route, seeks reasons, and notes that the U.S. system under the OSHA is inclined to the arbitrary, rather than persuasive as in other countries studied. Under the present U.S. laws, there is no short-term route to avoid the adverse relationship in any future case. This book clearly should be read by every health and safety official and regulator, and by every corporate officer who is involved in regulations, to elucidate the sensible, intelligence role of cooperation in future regulations.

H.H. FAWCETT