

**2ND
EDITION**

OCCUPATIONAL SAFETY AND HEALTH IN THE CHEMICAL INDUSTRY

**RUTH RUTTENBERG
RANDALL HUDGINS**

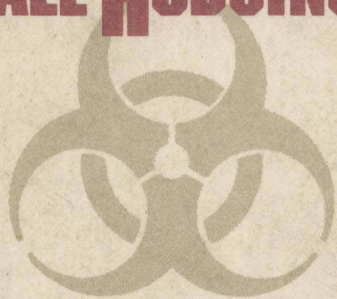


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STUDY

**OCCUPATIONAL
SAFETY
AND
HEALTH
IN
THE
CHEMICAL
INDUSTRY**

(Second Edition)

Ruth Ruttenberg
and
Randall Hudgins

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Forward to the Second Edition

This second edition of *Occupational Safety and Health in the Chemical Industry* adds data and analysis to the work of the first edition. Newly included is information on the contests of OSHA citations. Many companies contest their citations on a regular basis; others less frequently. Contests may affect the violation itself, the penalty and/or the abatement date. Because the data base of the study includes both adjudicated and non-adjudicated cases, information is provided to tell how many cases within the data base were open as of December 1979. All violations discussed in the text are violations as they were cited following an inspection.

The second edition also recognizes the number of inspections which found a facility in compliance as well as the variety of citations which resulted from plants which were out of compliance.

Because of a computer error, in the first edition, which eliminated several American Cyanamid inspections (and a few others among the 8 major chemical companies) from the company specific analysis, rankings in the second edition are different. So are the details in the company specific tables. Industry-wide tables remain in their original form. DuPont remains the major violator of OSHA standards among the eight. But, Union Carbide, not Cyanamid, has the record with the least OSHA violations.

Much of the industry criticism of this study, since the first edition, has focused on industry's desire to use lost-work day data rather than OSHA inspection and citation data to determine corporate performance. Lost-work day data are not available on a company-by-company basis, however, except for DuPont. In addition, it is the belief of these authors that the OSHA record, along with lost-work day data, is one useful performance measure. All measurements have their weaknesses. Lost-work day data record very few of the diseases that workers incur from hazards on the job. Accidents and acute illnesses may be recorded, but not the occupational health problems which this study documents as being of growing concern. In addition, claims have been made over the years that many injured and ill workers who cannot perform their normal function on the job are required to report to work anyway so as to avoid the recording by the firm of a lost-work day. Until such problems with lost-work day data are resolved, reliance

on this data base alone, if it were to become available on a company specific basis, would be a mistake.

The interest and response to this study have been larger than anticipated. We are heartened by the interest that industry, labor, government, scholars, the press, and many individual citizens have expressed in the subject of occupational safety and health in the chemical industry. It is our hope that this is indication that efforts will continue in monitoring and evaluating progress toward the national goal of a safe and healthful workplace for every American working man and woman.

Ruth Ruttenberg
Randall Hudgins

Summary of Findings

OSHA: Its Effect on Safety and Health

—The OSHA years 1972-79 have seen a marked improvement in the environment of the workplace, with the occupational injury and illness rate in the chemical industry declining by 23%, representing 88,000 fewer injuries and illnesses during that period.

—The OSHA offices that emphasize general inspections have a lower number of accident inspections. The Dover, Delaware office conducts 4.7% of the OSHA general schedule inspections but only 1.4% of their accident inspections; for Houston, Texas, on the other hand, the figures are 1.5 for general schedule and 9.3 for accident. One may reasonably conclude that general inspections serve a preventive function.

The Workplace and the Chemical Industry

—Chemical companies are among the most hazardous; the severity of their violations exceeded those of all other U.S. industries with the exception of mining. In 1977 while all U.S. industry had 2.7 violations per inspection, the chemical industry had 7.7.

—In the next decade health may replace safety as the number one problem. In 1974 only 3.3% of OSHA violations cited for the chemical industry had centered on health; by 1979 they accounted for 32.2% of the total. Over Two-thirds (69%) of these were cited during the last years, 1976-79, indicating that the dimensions of the threat to health may be only just emerging.

—Health problem are not only numerous but significant. Over the eight years 1972-79, only 17.6% of the safety violations were serious, while 51% of the health violations were classified under the OSHA level-3 (serious) category, one in which there is substantial probability that death or serious physical harm could result and that the employer knew, or should have known of the hazard.

The Eight Largest Companies

OSHA Record

—Accident inspections accounted for 8.9% of the OSHA inspections for the eight largest companies, more than twice the 4.1% for the chemical industry as a whole.

—Union Carbide has the best record of the eight.

—Dupont has the worst record. It has the highest number of serious violations and the most inspections generated by worker complaints. Though Dupont accounts for only 6.4% of the chemical industry's total shipments, it has been cited for 31.0% of all willful violations in the industry.

—The eight largest chemical companies, on average, contested their citations nearly twice as often as the rest of the industry. The variation by company, however, was large—with, for example, Dupont contesting over 57% of its citations and W.R. Grace contesting none.

Cost of Compliance with OSHA

—The average final penalty for a chemical company over the eight-year period 1972-79 was only \$74.79 per citation.

—The chemical industry's total investment in occupational health and safety is estimated to have been \$1.4 billion during the period 1972-79, or \$140 per year per employee, 2.9% of total capital invested by the industry and roughly one-sixth of one percent of industry sales.

OSHA and the Labor Force

—Worker complaints precipitated nearly 41% of the OSHA inspections for the eight companies, compared with 27.3% for the industry as a whole. Worker initiated inspections yielded twice the average number of serious violations per inspection as general inspections, indicating that the worker is a responsible and effective agent in ensuring compliance.

—The walkaround, an inspection in which an employee accompanies the compliance officer, occurs primarily in unionized plants. Eight-five percent of all violations in union plants are uncovered during the walkaround, only 4.2% in nonunion.

Financial Position

During the eight years 1972-79 of OSHA regulations, the chemical industry's financial progress has been impressive.

—Chemical industry output rose 50.7% between 1972 and 1979, compared with 32.1% for all U.S. manufacturing industries.

—The eight largest chemical companies return on net worth rose from 11.1% in 1972 to 14.9% in 1979.

—In 1979 the eight largest chemical companies internally generated enough cash to cover 99.8% of their investment in new plant and equipment plus dividends paid to stockholders. the average for all U.S. manufacturing was 94.7%.

Preface

We in the business community do not do as good a job as we should in protecting the workers. It is a complex, rapidly changing challenge. Research uncovers new evidence on the toxicity of chemicals to humans. The experts often disagree; substances thought to be safe turn out to be hazardous. We need all the help we can get.

Some of this comes from research that shows us as we are. The Council on Economic Priorities is dedicated to improving the social performance of U.S. corporations, thereby helping preserve our economic system. Some years ago Potlatch read a study on pollution in the paper industry conducted by the Council; they took it constructively and started to clean up their act. This CEP study on the chemical industry shows that there is room for improvement. I hope those studied take it to heart.

Useful though disclosure and knowledge of corporate performance may be, it is not enough. Cooperation, encouragement and standard-setting on a wide area are essential in today's world, especially when dealing with an issue that is as complex and critical as health and safety.

We at Vermont American have on our corporate staff an engineer who spends full time on safety inspections and in educating plant safety committees that include both workers and managers. Most inspections include a walkaround with the safety committee. The internal audit program includes a requirement that deficiencies noted by inspectors—particularly OSHA inspectors—have been remedied. Internal audits are reviewed by me as the CEO.

In addition to all this, our insurance agency, which handles claims on self insured plants, is unusually diligent in making inspections. The carrier of stop loss coverage and on fully insured plants makes periodic inspections.

But a company, even when well-intentioned, cannot do it alone. We need the cooperation of labor. We need the standards of OSHA to keep us up to the mark. They make available new ideas and new protective devices that have been used in other companies. Their records, like ours, are open to OSHA; we are all held accountable to the same standards. Yes, occasionally we get an inspector who complains over picayune details, but mostly they are fair. And, let's face it, knowing that we are going to be inspected keeps us on our toes. It reminds us that we—corporations, labor, the Government—have a common objective: to create a safe, healthy work environment.

According to this report, we have a long way to go. I plead with you to read it carefully and with an open mind. If one worker is spared a cancer death, it will have been worthwhile!

Lee B. Thomas, Jr., President
Vermont American Corporation

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