

HEALTH + SAFETY

NEWSLETTER

CHEMICAL
MANUFACTURERS
ASSOCIATION

2501 M Street, NW
Washington, DC 20037
202/887-1100

CM^A

National Safety Council Ranks Chemical Industry Number One

RECEIVED

NOV 2 1984

J. M. NORWOOD

According to the National Safety Council's (NSC) 1984 edition of Work Injury and Illness Rates, the chemical industry is the safest of 42 principal U.S. industries. This rating is based on the number of incidents of occupational illness and injury involving days away from work and deaths.

We achieved first place in the 1984 rating based on our 1983 incidence rate of 0.53 cases per 100 full-time employees. Compared with the average incidence rate of 2.20 cases for all industries, chemical workers are more than four times safer than the average U.S. industrial employee.

The National Safety Council data reflects the ever-improving safety record of the chemical industry. In the 1982 rating in which we ranked first, our incidence rate was 0.74 cases. In 1983, although we ranked second after the aircraft industry, the chemical industry's incidence rate dropped to 0.64 cases.

While the chemical industry's safety record has shown steady improvement, overall industry has not. NSC's 1984 report indicates that the overall industry incidence of 2.20 cases per 100 full-time employees is up from the previous year when the average incidence was 2.11 cases.

The bar graph of incidence rates from the 1984 report is printed on the reverse side.

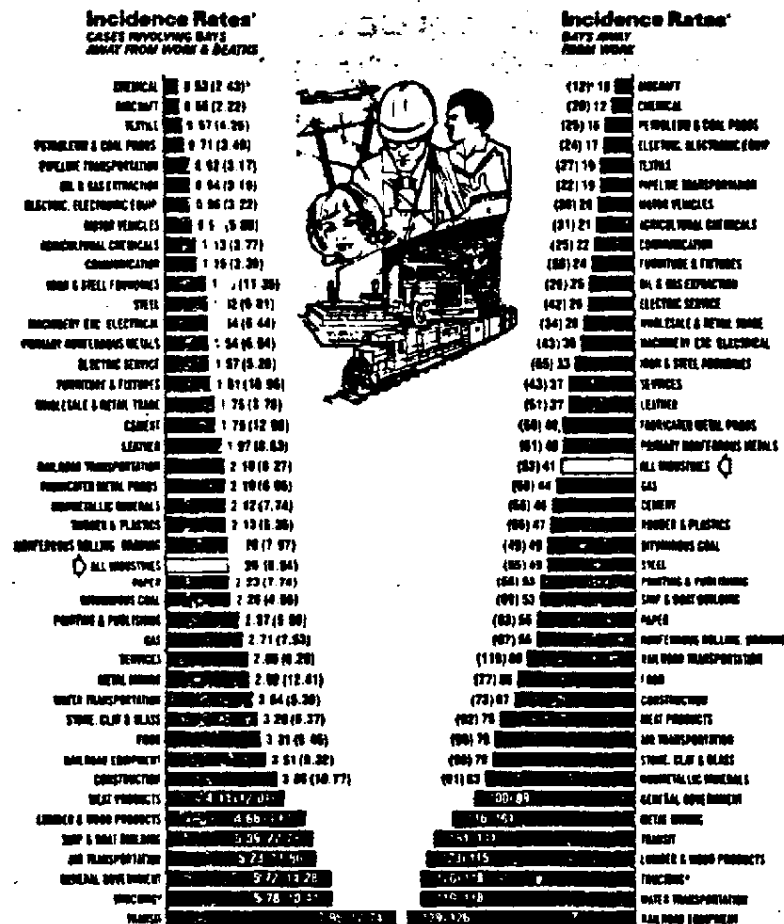
For additional information call Robin Hertz at 202-887-1282.

11/19/84

AP00005213

1983 Incidence Rates* of Principal Industries

Recordable Occupational Injuries and Illnesses
Reporters to the National Safety Council.



Source: Based on reports of National Safety Council members participating in the Award Plan for Recognizing Good Occupational Safety Records. These rates should not be interpreted as representative of the industries listed or of Council member companies. Data compiled in accordance with OSHA recordkeeping definitions.

*Incidence rates per 100 full-time employees, using 300,000 employee hours as the equivalent.

*Rates in parentheses are Total Recordable Cases.

*Rates in parentheses are Total Lost Workdays.

*Excludes SIC code 4215.

Source: Work Injury & Illness Rates 1984
National Safety Council

AP00005214

Chemical Industry Keeps No. 1 Worker Safety Rating

The chemical industry, for the second year in a row, provides the safest U.S. workplace according to the National Safety Council's list of safest U.S. industries.

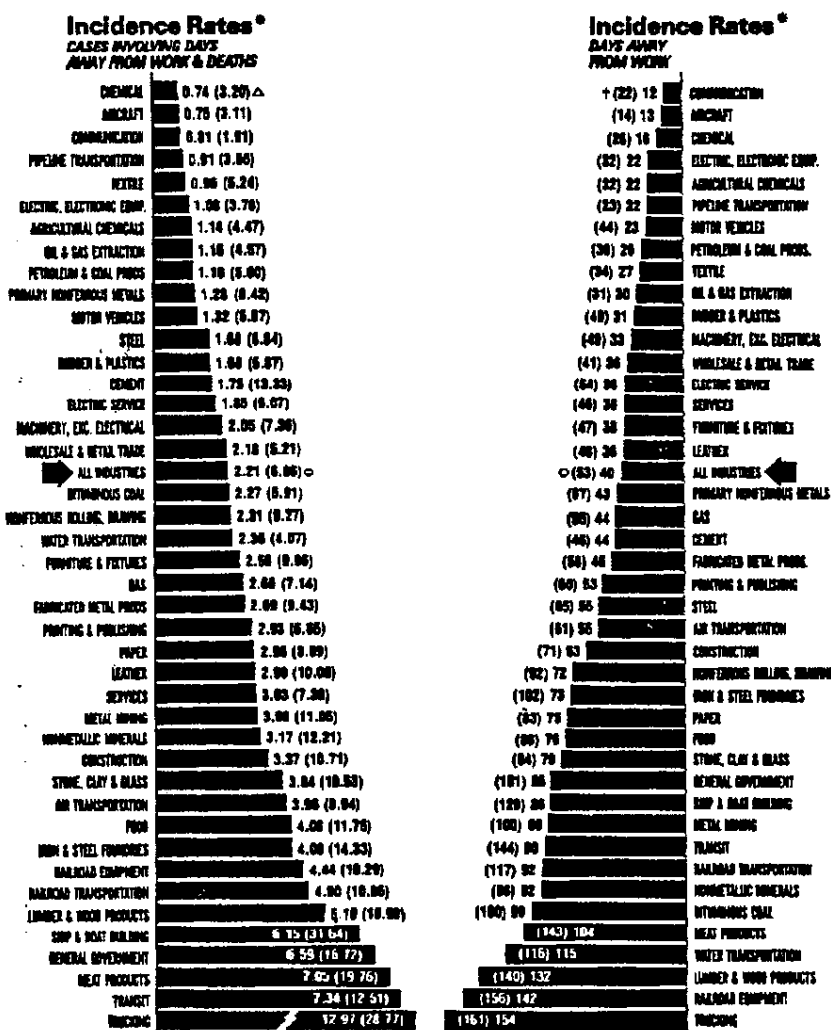
According to the NSC's 1982 edition of "Accident Facts," the chemical industry again ranks first among 42 basic U.S. industries in the lowest numbers of incidents of occupational illness and injury involving

days away from work and deaths. The chemical industry, the NSC reported, had an incidence rate of 0.74 cases per 100 full-time employees, compared to 2.21 cases for all industry making the chemical workers three times safer than the average U.S. industrial employee.

Robert A. Roland, president of the Chemical Manufacturers Association, said the Safety Council's statistics are evidence of the industry's continuing commitment to ensuring worker health and safety. "The figures show that a chemical industry employee is much safer at work than at home, on the highway or even working in his backyard. Mr. Roland also noted that the industry cannot and will not rest on its achievement of accident prevention alone. The great record that chemical companies have compiled in job safety has become the foundation for a still broader effort in worker health protection."

1981 incidence rates of principal industries

Reporters to the National Safety Council



Data compiled in accordance with BSHA Recordkeeping definitions. See page 32.

* Incidence rates per 100 full-time employees, using 308,055 employee hours as the equivalent.

△ Rates in parentheses are for Total Recordable Cases.

† Rates in parentheses are for Total Lost Workdays.

○ See footnote on page 33 regarding comparability from year to year.

Credit: National Safety Council

Companies Form Chemical Waste Treatment Firm

A chemical company, waste management company, and pollution control firm have joined in a \$20-million project to clean up and treat chemical wastes at a site in Muskegon, Michigan.

The Environmental Systems Corp., is being formed by Bofors Nobel, Inc., Chemical Waste Management Inc., and Zimpro Inc.

ESC will treat contaminated soils and wastewater inherited by Bofors Nobel when it purchased Lakeway Chemical Company in 1977. Treatment is required under a court-sanctioned agreement reached by the company with the Michigan Department of Natural Resources.

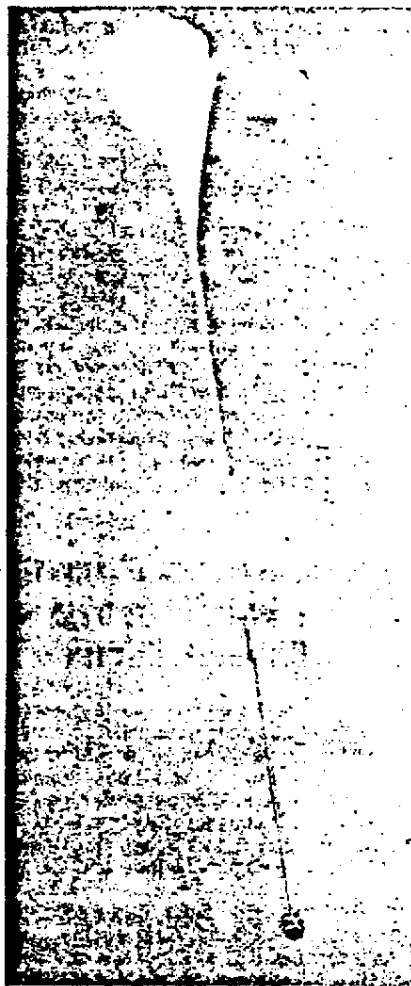
ESC also will treat chemical wastes generated at the site by the continued operations of Bofors Nobel Inc.

The objectives of ESC are to develop and implement environmentally sound and competitive waste disposal systems and clean up the contamination at the Bofors Nobel site.

Five major types of treatment will be used. They are pyrolysis for destruction or organic chemicals, powdered activated carbon treatment for wastewater streams, acid detoxification and neutralization, wet air oxidation for nonbiodegradable toxics and a secure landfill for residues.

CHEMECOLOGY

Balloons Aid Atmospheric Studies



Helium helps pull this balloon, which will be 500 feet in diameter when fully aloft, to a height of about 24 miles.

More than a year of cooperation and coordination between scientists from seven nations paid off recently when four balloons—each as large as a city block—were launched on the same day from the National Scientific Balloon Facility at Palestine, Tex.

This balloon launch was the first phase of the National Aeronautics and Space Administration's Balloon Intercomparison Campaign. The campaign is designed to validate the measurement techniques used to determine the effect of man's activities on the modification of the atmosphere.

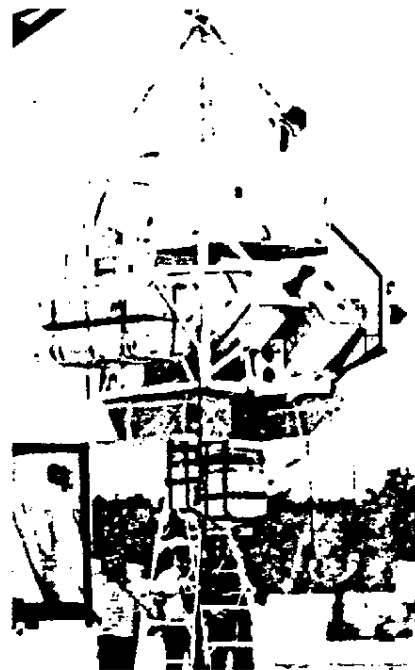
Each of the balloons launched on September 22 carried a gondola loaded with advanced instruments used to measure radicals and molecules which play a key role in determining the formation and removal of ozone in the stratosphere. A number of these trace species were measured by more than two instruments. Verification of the measurements obtained by a specific instrument during this experiment will enhance the value of previous data acquired by the same instrument.

One of the four balloons proved defective but the gondola was successfully retrieved and flown again on October 5.

Dr. R.T. Watson of NASA, campaign manager for the project, said that the objective of the first phase of the campaign was to fly 14 measuring instruments for up to 24 hours at a height of about 24 miles. In spite of the defective balloon and relaunch, this was achieved and all of the instruments operated as designed.

Dr. Watson said the exercise combined measurements taken by balloon-borne instruments with ground-based instruments at Kitt Peak National Observatory in Arizona and at Holloman Air Force Base, N.M., together with supporting measurements from instruments in an aircraft flown by the National Center for Atmospheric Research.

At the same time, in order to fully define the meteorological properties of the air mass in which the measurements were made, scientists from the Atmospheric

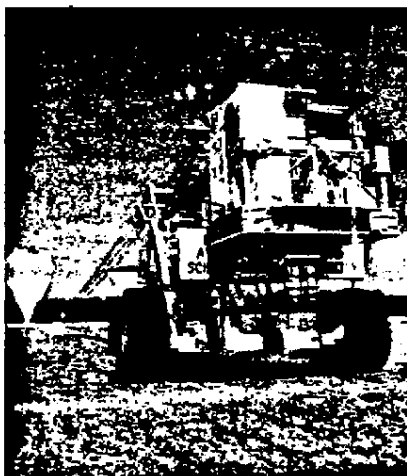


The balloon gondola contains test instruments that will measure trace species in the atmosphere.

Environment Service in Canada launched smaller balloons at six hour intervals before and during the mission. Radar tracking of all balloons was done by the National Scientific Balloon Facility and NASA. Satellite observations were also used.

Dr. Watson noted that, "the success that has been achieved is a reflection on the skill and coordination of NSBF personnel and the service that it offers to the international scientific community."

Dr. Joseph M. Steed, chairman of the Fluorocarbon Program Panel of the Chemical Manufacturers Association, one of the sponsors, noted that "the stratosphere is a subject of intense international investigation and for this exercise, some of the world's leading scientists in the field were brought together." The instruments used were provided by Belgium, Canada, England, France, Italy, Japan and the United States. Funding for the project is provided by the nations participating, the NASA Upper Atmospheric Research Program, the Fluorocarbon Program Panel of CMA and the Commission of the European Communities.



NASA's launch vehicle.

New rules protect worker hearing

New hearing conservation rules that will cut work-related hearing impairment by 84 percent have been issued by the Occupational Safety and Health Administration.

OSHA expects the revised hearing conservation program will reduce hearing impairment cases from about one million to a sixth of that number, while saving \$81.4 million annually in originally projected program costs.

"This revised, performance-oriented program maintains effective protection for the 5.1 million workers exposed to a high level of noise while allowing their employers the flexibility they need to find the most cost-effective means of providing that protection," OSHA Administrator Thome G. Auchter said.

The program requires workplace monitoring, audiometric testing and recordkeeping. It also requires employers to make hearing protectors available to workers



Ear muffs are one form of personal hearing protection.

exposed above a certain noise level and to ensure their proper use by employees.

A brochure describing the essentials of the hearing conservation program can be

obtained by writing to OSHA Publications Office, Room S1212, Department of Labor Building, 200 Constitution Ave., N.W., Washington, D.C. 20210.

Companies break safety records

The chemical industry is committed to worker safety. It's a commitment that makes it the safest industry in the U.S., according to National Safety Council statistics. Here, two CMA member companies review their 1982 safety performance.

Dow

If safety records are made to be broken, Dow Chemical employees delighted in record-smashing in 1982.

Dow employees, who have long been among the safest in an industry classified by the National Safety Council as the safest in the U.S., etched new records throughout 1982. Specifically, Dow employees:

* Set a new worldwide record low for themselves with a lost-time injury rate of **0.17 per million** hours worked, a 23 percent improvement over the company's best year of **0.22 in 1980**;

Set a new Dow Chemical U.S.A. record low lost-time injury frequency rate of **0.23**, and improvement over Dow U.S.A.'s previous best year of **0.25 in 1980**; and

Completed their safest year ever in motor vehicle operation. There were no motor vehicle injuries or fatalities in 1982, either in the United States—where employees drove more than 218 million miles—or anywhere else in the world.

The general trend in work-related accidents in Dow has shown a strong and continuing decline for more than a decade.

The trend closely parallels the experience of the U.S. chemical industry in general.

The chemical industry, according to records of the NSC, has shown a general improvement nearly every year since the end of World War II when it ranked ninth best of the major industries. It was ranked either fifth or sixth of the 42 major industries during the period from 1964 to 1976. In 1977, the chemical industry was ranked third best. And in 1979, it moved to second place.

In 1980, the chemical industry was ranked first in safety performance, and again in 1981, the latest year for which statistics are available.

The average frequency rate for all 42 industries on which the NSC keeps records was 11.05 in 1981, making Dow U.S.A. 29 times safer than the average for all U.S. industries.

DuPont

The Du Pont Company's 180,000 employees achieved the best safety performance in company history during 1982.

Du Pont operations excluding Conoco achieved a lost workday case rate of **0.019**—injuries per 200,000 hours worked, a 57 percent improvement over 1981. "Based on the average for companies reporting to the National Safety Council in 1981, we were already 18 times better than the United States chemical industry as a whole and 54 times better than all U.S. industry," Du Pont chairman Edward G. Jefferson pointed out.

Conoco continues to be a safety leader in the petroleum and coal industries. At year-end 1982, Conoco employees had the best job safety record in the company's history. The lost workday case rate represented a 20 percent improvement over 1981.

Du Pont's international operations excluding Conoco led the 1982 performance. The 31,000 employees in 77 sites abroad worked 144 consecutive days without a single lost workday. During that period, the company's U.S. and overseas employees worked a record 52 days—from Aug. 10 through Sept. 30—without a lost workday. "These remarkable achievements could not have happened without the tireless attention and commitment of every employee," Mister Jefferson said.

Based on National Safety Council statistics maintained since 1977, Du Pont operates the plant with the best safety record—nearly **46,000,000** consecutive hours worked without a lost work injury—in the chemical industry in Chattanooga, Tenn.

APRIL 1983

(CWOA)

* HIGH - CMA REPORTS SHOW 0.05 FOR DOW IN 1982 !! AND 0.07 IN 1981.

CE - 0.17 / 1,000,000 = .03 / 200,000

AP00005217

Put risks in perspective, Strickland urges

Scarcely a week goes by without an announcement of a new study identifying a new cancer causing substance. Soon another report is released with contrary results. In this interview for CMA's radio program *The Report*, CMA Deputy Technical Director Gordon Strickland discusses the problem.

ChemEcology: Are these conflicting reports evidence of indecisiveness in the scientific community? Or is the problem the way the test results are announced?

Strickland: Scientific reports are normally published in scientific journals as part of a peer review process. Qualified scientists send who read the journals their criticisms and interpretations to the author. Sometimes, those criticisms point out serious flaws.

The media, always very interested in any discovery suggesting a threat to public health, frequently don't await completion of this peer review process. Public officials are, as you can well imagine, pressured to regulate on the basis of these preliminary reports. When the peer review process is completed, months or even years later, the government may have to reverse its position because its regulation was based on a laboratory error or misinterpretation.

ChemEcology: Is anyone working to solve this problem?

Strickland: Yes. For example the Environmental Protection Agency now works with several hundred renowned scientists to speed up the peer review of studies that



Gordon D. Strickland

form the basis of regulations. Hopefully, those scientists will put things in perspective. And perspective is important, because how long you're exposed to something, how much you're exposed to and how it gets into your body, all determine if it will hurt you.

ChemEcology: Can you give me an example?

Strickland: Chlorine's a good example, in drinking water it protects you from disease and in strong chlorine bleach it cleans your

clothes, but it can also irritate your hands. As a concentrated gas, even a few breaths can be fatal. Now let's put that in perspective. Although chlorine can be dangerous, all of us use it. The actual problems caused by its day-to-day uses are insignificant.

CMA: What it is

Chemical Manufacturers Association, formerly the Manufacturing Chemists Association, is a non-profit trade association of United States and Canadian company members representing more than 80% of the production capacity of basic industrial chemicals within these countries. CMA is engaged in basic activities pertinent to the chemical industry, including many related to environmental health. Activities are handled by CMA's staff and by committees composed of industry specialists who serve without compensation from the Association. CMA offices are at 2801 M St., N.W., Washington, D.C. 20037.

EXECUTIVE EDITOR: James P. Turner

EDITOR: Beverly Lehrer

TECHNICAL ADVISORS:

From Industry: H. G. Haight Jr., Du Pont Company; Lynn Johnson, Rohm and Haas, Co.; Ernest C. Ladd, PMAC Corporation; James E. Norie, CIBA-GEIGY Corporation; Charles L. Serou, Dow Chemical U.S.A.; Richard Sobel, Allied Chemical Corporation, and Ned Walters, Du Pont Company.

From the CMA Technical Staff: David W. Carroll, Geraldine V. Cox, Milton Friedel, Janet S. Meley, Joe J. Mayhew, Robert R. Romano, Harry J. Sauer, Langley A. Spurlock, Gordon D. Strickland and John C. Van Horn.

No special permission is required to quote or reproduce from the publication. Credit will be appreciated.

To be added to ChemEcology's mailing list, send your name and address to: Editor, ChemEcology at CMA. The newsletter is free. Bulk quantities are available.

If you are presently on our list and wish to be dropped or require an address change, please include your present address label with your request.

CHEMECOLOGY

CM^A

CHEMICAL
MANUFACTURERS
ASSOCIATION

2801 M Street, N.W.
Washington, DC 20037
202/687-1100

M U 18105BALLAIRM CE08 MAR
MR W L BALL
AIR PRODUCTS & CHEMICALS
PO BOX 538
ALLENTOWN PA 18105

FIRST CLASS MAIL
U.S. POSTAGE PAID
SPRINGFIELD, VA.
PERMIT NO. 170

AP00005218