



Occupational disease disclosures - more future shocks?

by Stephen Crapnell

The past year saw ominous occupational disease disclosures surface with troubling frequency. With more government, labor, and industry resources being directed to occupational health, will 1978 be a year of progress against occupational disease, or will the troubling disclosures keep coming?

OCCUPATIONAL health hazards produced a string of startling disclosures in 1977. In case after case, substances thought to be safe, or at least safely under control, were discovered to produce hormonal changes, sterility, and cancer.

Here is a brief recap of some of 1977's most troubling occupational disease disclosures.

Benzene: On April 15, NIOSH notified OSHA that a study of workers exposed to benzene at two Ohio Goodyear Tire and Rubber Company plants revealed an excessive number of deaths due to leukemia. Two weeks later, OSHA-boss Dr. Eula Bingham issued an emergency temporary standard (ETS) for benzene, effective May 21, that reduced permissible worker exposure from a previous level of 10 parts per million (ppm) to 1 ppm. Over 150,000 workers in the U.S. are exposed to benzene. But before the ETS could go into effect, the American Petroleum Institute, the National Petroleum Refiners Association, and 15 petroleum companies obtained an injunction in the courts. On May 27, OSHA pro-

posed a permanent benzene standard. Public hearings were concluded on August 10, but as we go to press, the final standard has not been issued.

DES: On April 28, the Oil, Chemical, and Atomic Workers Union (OCAW) requested that OSHA declare a situation of imminent danger at Dawe's Laboratories, Inc., Chicago Heights, Ill. OCAW told OSHA that 9 out of 17 male employees exposed to the synthetic hormone diethylstilbestrol (DES) complained of breast enlargement and one worker had already had surgery to remove his enlarged breasts. Two more workers complained of impotence.

OSHA inspected and cited Dawe's for three willful serious violations, four serious violations, and proposed a \$34,000 fine. Later, Dawe's was cited for another willful serious violation and a failure-to-abate violation. At presstime, Dawe's had ceased production of DES, but was contesting the citations. The case is pending as we go to press.

Acrylonitrile: On May 23, E. I. du

Pont de Nemours informed NIOSH that an epidemiological study of 470 workers at its textile fibers plant in Camden, S.C. showed that workers exposed to acrylonitrile had developed 16 cases of lung, colon, and other cancers, compared with an expected company rate of 5.8 and a national rate of 6.9. Du Pont lowered worker exposure from 20 ppm to 2 ppm.

On July 1, NIOSH issued warnings that on the basis of the Du Pont study and an interim report on a Manufacturing Chemists Association study, which showed rats fed or inhaling acrylonitrile to be developing a variety of tumors, acrylonitrile should be handled "in the workplace as if it were a human carcinogen." NIOSH also apprised major manufacturers and users of the possible adverse health effects associated with acrylonitrile exposure. Some 125,000 workers are potentially exposed to acrylonitrile.

On June 28, OSHA requested information on acrylonitrile in order to determine whether or not to issue an ETS. On September 29, NIOSH

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"Sixteen permanent health standards have been set in the seven years OSHA has been in business. That's absurd when there are two million chemicals in existence and 25,000 known toxic substances cited by NIOSH. . . ."

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recommended that worker exposure to acrylonitrile be limited to 4 ppm, or 8.7 milligrams per cubic meter of air, as determined by a 4-hour sample collected at 0.2 liter per minute.

DBCP: On July 28, Occidental Chemical Company closed the agricultural chemical operations in its Lathrop, Calif. plant after learning from fertility tests that 14 of 27 men handling the pesticide dibromochloropropane (DBCP) were either sterile or had very low sperm counts. On August 11, Dow Chemical Company, a basic producer of DBCP, closed its plant manufacturing DBCP in Magnolia, Ark.

On August 16, OSHA sent telegrams to 75 companies manufacturing DBCP asking that they take appropriate action to protect workers from exposure to the chemical. On August 23, OCAW requested that OSHA issue an ETS for DBCP limiting exposure to 1 part per billion (ppb), the lowest detectable level. OSHA responded with an ETS for DBCP limiting exposure to 10 ppb over an 8-hour period and to a ceiling level of 50 ppb during any 15-minute period. In announcing the ETS, OSHA cited the sterility test findings and animal studies which showed DBCP causing cancer in two species and two target organs, the stomach and mammary glands. When OSHA later determined that DBCP was detectable at levels lower than 10 ppb, it issued a proposed permanent standard with an exposure level of 1 ppb.

Little wonder that a major OSHA priority in 1978 is serious health hazards.

Carcinogen policy

The cornerstone of OSHA's occupational health effort in 1978 will be its proposed generic carcinogen



Secretary of Labor Ray Marshall: OSHA's proposed carcinogen policy will be a major breakthrough.

policy, which Secretary of Labor Ray Marshall has described as representing a major breakthrough for OSHA. "Trying to control carcinogenic substances on a case-by-case basis is like trying to put out a forest fire one tree at a time. Instead, we are proposing a systematic way of determining which toxic substances require emergency attention by OSHA," Marshall said.

The proposed policy sets procedures for regulating worker exposures to potential occupational carcinogens, policies to identify and classify such substances, and establishes three model standards for use in rulemaking involving specific substances.

Under the proposed system, OSHA or any other party could submit information to the Secretary of Labor concerning any toxic substance. The Secretary then publishes a notice of receipt of this information in the Federal Register,



OCAW President A. F. Grosipron: Unhappy with OSHA's progress in promulgating health standards.

though he may delay publishing this notice for up to 180 days if he is aware that additional relevant information is currently being prepared. A public comment period of 30 to 60 days follows, after which a notice classifying the substance into one of three categories must be published within an additional 30-day period. In especially pressing situations, the Secretary may issue an ETS without waiting for a comment period.

Category I would contain substances whose carcinogenicity has been established in humans, in two mammalian species of test animals, or in one species if those results have been replicated. After being classified in Category I, a substance would then be the subject of the proposed model emergency temporary standard, followed by a Category I model permanent standard.

Under this procedure, rulemaking debate for specific substances

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lieves the policy would provide a predictability of response on OSHA's part. He favors the acceptance of animal carcinogenicity as a test for human carcinogenicity. His lone reservation: setting worker exposure levels for carcinogen standards at the lowest point that is technologically feasible, rather than at a zero exposure level.

Sheehan also observed that the carcinogen policy had received advance billing as a generic approach to standards-setting, and said, "I

don't think this is a true evaluation of what the document does. The policy says how you will promulgate standards. OSHA must still decide whether to set standards for classes of carcinogens or go substance-by-substance."

Timetable

All materials and written testimony concerning the proposed carcinogen policy must be filed for the hearing record by no later than January 9, 1978. An informal hear-

ing is scheduled to begin March 14, 1978.

OSHA sources estimated that, barring legal challenges, the carcinogen policy could be in effect by the end of next summer. However, both industry and labor spokesmen believe that court battles are ahead which might delay the policy's implementation by 1 to 2 years.

Standards in store

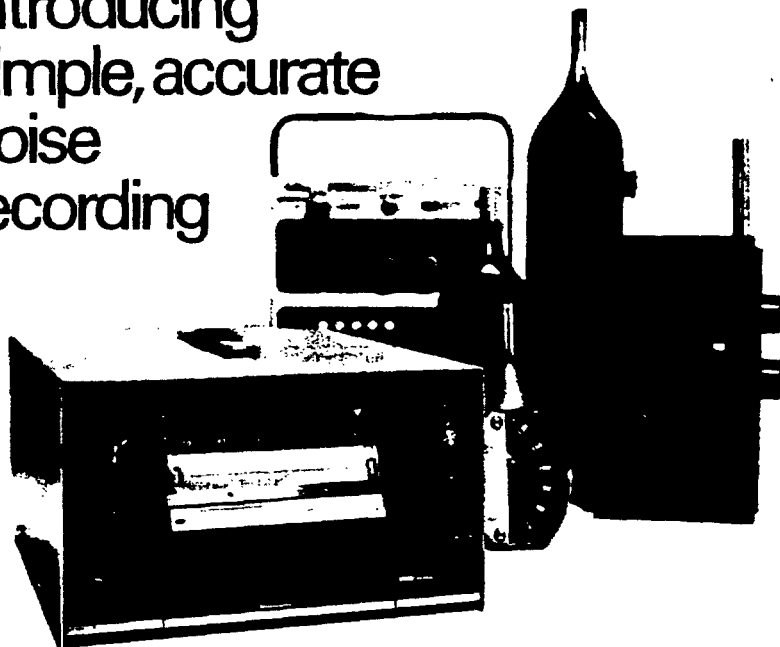
Other health items on the OSHA agenda for 1978:

The worker's right to know what dangerous substances he or she is exposed to. A recent study by NIOSH, entitled "The Right to Know," found that "employers were often not aware of the chemical composition of the substances used in their plants" and "the widespread use of trade name products and lack of a uniform system for labeling hazardous materials makes it difficult for workers to know the nature of substances they are exposed to. This problem is compounded by the frequent claim that product ingredients are trade secrets, even though ingredients may be known to be toxic or even cause cancer." In response to this problem, Under Secretary of Labor Robert J. Brown announced in October that "... a generic standard is now being prepared to regulate the labeling and identification of all substances. We believe that workers' knowledge of what they are handling is essential to the improvement of conditions in our workplaces."

Development of a standard covering worker exposure to certain pesticides. This standard is likely to be a generic standard and has been spurred by concern over such pesticides as DBCP and EDB.

John Froines, director of the Office of Toxic Substances in OSHA, told us that by the end of January, OSHA hopes to have issued final cotton dust and lead standards. Depending on when these are completed, OSHA will then proceed with a final sulfur dioxide standard. By the end of 1978, OSHA hopes to issue standards for asbestos, toluene diisocyanate, abrasive blasting, silica, and chlorinated hydrocarbons. And there's even an outside chance that the long-awaited new noise standard might surface next year. ■

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"... The widespread use of trade name products and lack of a uniform system for labeling hazardous materials makes it difficult for workers to know the nature of substances they are exposed to."



SPI President Ralph H. Harding, Jr.: Criticized OSHA's proposed carcinogen policy as a "quick fix" method."



John Froines, director of OSHA's Office of Toxic Substances: First priorities are cotton dust and lead standards.

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Ralph H. Harding, Jr., president of the Society of the Plastics Industry, called the OSHA proposal "a 'quick fix' method of dealing with the admittedly difficult task of reducing the risks of occupational health hazards." Harding criticized the proposal for "placing undue reliance on limited animal tests to demonstrate carcinogenesis." He questioned the validity of two animal tests or a single replicated animal test being extrapolated for carcinogenicity in man. Harding also criticized OSHA's key tenet that there is no safe threshold for a potential carcinogen and called for the creation of "a medical review and assessment board" to examine animal test data prior to any OSHA enforcement action.

The Manufacturing Chemists Association (MCA) expressed "seri-

ous concerns" with OSHA's refusal to recognize degrees of carcinogenic strength. MCA said that "Better guidelines are needed for determining the acceptability of toxicological data, resulting from animal studies and epidemiological investigations." MCA called for clarification of the decision-making procedures involved in choosing a "suitable substitute" for a regulated carcinogen and added that notice of such a substitute "should appear in the *Federal Register* so that affected parties will have an opportunity to comment before a final ruling is published." Finally, MCA said that "performance standards rather than specification standards to achieve desired performance should be clearly stated in the regulation."

A spokesman for Du Pont called the OSHA proposal "a simplistic

approach to a complex problem. All carcinogens are not alike. Some are weak; some present a lot of risks to many people; some present very little to very few. OSHA proposes to treat them all alike. The resulting system will be easy for government to administer, but excessive and wasteful for everyone else. Employees can be adequately protected by dealing with carcinogenic substances on a case-by-case basis, applying professional knowledge, judgment, and experience to determine what specific protective steps are necessary for each. Acceptable exposure levels based on 'no effect' levels can be established in many cases."

Labor for it

OSHA's proposed carcinogen system gets high marks from labor.

OCAW Legislative Director Anthony Mazzocchi called it "a serious move forward in the right direction," though he said that OSHA should have included a rate retention provision.

Louis Beliczky, United Rubber Workers' director of industrial hygiene, said the cancer proposal is a "good policy," but added, "I see some problems in that management will automatically challenge the ETS's in court." However, Beliczky added that even if the carcinogen standards are challenged, OSHA will have succeeded in getting more carcinogens recognized as such.

John J. Sheehan, legislative director of the United Steelworkers, said of the policy: "It's good. There definitely should be a carcinogen policy, and we find that the content of the proposed policy, for the most part, is acceptable." Sheehan be-

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would be limited to: whether a substance was correctly classified in Category I; whether the Secretary was correct in determining that the Category I classification not be rebutted; whether the lowest feasible exposure limit was selected or whether there are suitable less hazardous substitutes; whether the substance has unique properties that make provisions of the model inappropriate; and the environmental impact of the substance's regulation.

Category II substances would be those whose evidence of carcinogenicity was only suggestive, or is positive in only one species and not yet replicated. Classification in this category would be followed by rulemaking utilizing the model permanent standard for Category II.

Category III substances would be those which require further information. OSHA would keep a list of these substances, publish them in the Federal Register, and request from EPA, NIOSH, the National Cancer Institute, and the Consumer Product Safety Commission any information they might have on the substance.

A final classification, Category IV, is reserved for those substances which OSHA believes are not currently found in the American workplace, and involves no regulatory action.

OSHA objectives

OSHA has based the proposed carcinogen policy on three essential tenets. The first is that "the term 'carcinogen', although admittedly difficult to define scientifically, must be defined for purposes of overall regulatory activity." This tenet holds that though medical and scientific debate continues concerning the nature of cancer, OSHA as a regulatory agency cannot afford to sit idle and allow workers to die from cancer caused by occupational health hazards. The proposal points out, "... Congress mandated that standards should not be postponed because definitive medical or scientific evidence is not currently available."

An underlying aspect of this tenet is that because OSHA has not had a generic policy for dealing with carcinogen regulation, it has been dragged into repetitive debates over issues such as whether a safe expo-

The AFL-CIO is establishing a Workers Occupational Health and Safety Institute that will doubtless be heard from in 1978.

Sheldon Samuels, Director of Health, Safety, and Environment for the AFL-CIO's Industrial Union Department, told *Occupational Hazards* that the institute will give labor the ability to deal with the scientific basis of health policy. The institute will be staffed with a physician, epidemiologist, toxicologist, licensed professional engineer, industrial hygienist, educator, lawyer, and information specialist, and will have funds available to retain outside consultants. A preliminary search for staff is already under way. The AFL-CIO's Standing Committee on Occupational Safety and Health has given the institute provisional approval, and the union's Executive Council is ex-

Labor's Equalizer

pected to give final approval as soon as funding details are worked out—probably sometime this month. The institute is to be supported completely by union money.

OCAW president Groszpiorn, Chairman of the AFL-CIO Standing Committee on Occupational Safety and Health, explained the institute's value to labor in a recent speech: "The creation of a workers' job health and safety institute signals the end of an era for labor in occupational health—an era where our ignorance of occupational hazards forced us into a reactive position. The resources of a labor institute mean that labor will no longer have to wait for a crisis to intervene, but will be able to move aggressively towards preventive occupational health practices, where crises will be anticipated and prevented before they occur."

sure level for carcinogens exists; whether animal data could be accepted as evidence that a substance could cause cancer in man, and the appropriateness of regulatory requirements such as monitoring or recordkeeping. In the past, these debates have slowed the standards-setting process and brought criticism from the Government Accounting Office, the House Committee on Government Operations and from some medical scientists and virtually all labor leaders.

Recently, for example, OCAW President A.F. Groszpiorn lashed out at OSHA on this subject: "Sixteen permanent health standards have been set in the seven years OSHA has been in business. That's absurd when there are two million chemicals in existence and 25,000 known toxic substances cited by NIOSH in their annual Registry for Toxic Effects of Chemical Substances. Another 2,000 substances have been indicted as potential carcinogens in the NIOSH Suspected Carcinogens List. What makes them potential rather than actual carcinogens is the fact that no dead-

bodies have turned up as definite evidence."

The second tenet upon which OSHA's proposed carcinogen policy is based is: "A toxic substance, determined as a carcinogen in a mammalian test animal system, as defined, is to be treated as a policy matter as posing a carcinogenic risk to humans."

The third tenet is that OSHA will establish as a general rule that "when OSHA is dealing with a toxic substance, identified as a carcinogen... the permissible exposure limits will be set as low as feasible. In cases where there are suitable substitutes that are found to be less hazardous to the worker, no occupational exposure will be permitted."

Industry's response

Industry spokesmen laud OSHA's aim of reducing worker exposure to occupational carcinogens, but they are generally critical of the way in which OSHA is going about it.

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