NIOSH

CURRENT INTELLIGENCE SYSTEM

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Center for Disease Control
National Institute for Occupational Safety and Health

CURRENT INTELLIGENCE SYSTEM

In January 1975, the National Institute for Occupational Safety and Health (NIOSH) developed its Current Intelligence System. Through this system, persons concerned with occupational health are promptly informed of health and safety hazards that may not have been previously recognized. The Current Intelligence System is not only a notification system; it also involves the evaluation of a wide spectrum of other information on potentially hazardous substances.

Information requiring evaluation and possible NIOSH action may come from several sources, including industry, labor, academia, and other government agencies. This information is supplemented with data on the use of the substance in the workplace, its toxicity in man and animal (including its cancer-causing potential), the number of persons at risk of occupational exposure, and work practices. After all available information has been evaluated, the Technical Evaluation and Review Branch suggests appropriate NIOSH action.

If the information shows there is a potential occupational health hazard, an advance Mini Current Intelligence Bulletin on the hazard is given limited distribution within the Federal government. Later, if warranted, a regular Current Intelligence Bulletin presenting this information is distributed to appropriate members of the occupational health community, as well as to public interest groups and appropriate international, Federal, and state agencies.

Since the inception of the NIOSH Current Intelligence System, numerous Current Intelligence Bulletins have been issued. Many of these Bulletins have dealt with the carcinogenic potential of specific chemical agents. Some of these address the carcinogenic potential of an agent based primarily on human data. One, concerning chloroprene (a chemical intermediate used in the manufacture of rubber), was based on Russian data suggesting an in-

creased incidence of skin and lung cancer in exposed workers. A second Bulletin on chrome pigments concerned workers exposed to lead chromate, who were shown to have a high rate of lung cancer. This type of chrome pigment provided color for paint, printing inks, floor coverings, and paper. In a third Bulletin on asbestos, a review of the scientific literature revealed an association between asbestos exposure and mesothelial tumors of the pleura and peritoneum in at least four persons whose jobs involved automobile brake servicing. A fourth involved a cohort study of workers exposed to polychlorinated biphenyls (Aroclor 1254), also known as PCB's, that showed significantly more skin cancer (melanoma) and pancreatic cancer than would be expected in a population of the size studied.

Other cancer Bulletins have been based on the carcinogenic potential of agents in animals. In these cases, the chemical agents (such as trichloroethylene, ethylene dibromide, hexamethylphosphoric triamide, chloroform, dimethylcarbamoyl chloride, nitrosamines in cutting fluids, and phenyl-beta-naphthylamine) were presumed to be capable of inducing cancer in man. In addition to carcinogens, Current Intelligence Bulletins have dealt with a number of other issues, including the implication of 4,4'-diaminodiphenylmethane in a number of cases of toxic hepatitis among construction workers using epoxy resins, and have given warning to 18,000 hospital and clinical laboratories of the potential of explosive azides in plumbing systems along with recommendations for decontamination.

MINI CURRENT INTELLIGENCE BULLETINS

One of the first stages of the Current Intelligence System is to prepare a preliminary evaluation and summarization of the new information and to distribute this as a Mini Current Intelligence Bulletin. The Mini Bulletin is usually 2 to 3 pages long and is distributed to NIOSH Office and Division Directors and to key Federal agency personnel. It is the first product of an extensive review and evaluation of all

pertinent data related to the chemical or physical agent.

The Mini Bulletins serve to inform other government agencies of the new data under review so they may "gear up" for any possible impact and to request additional data these agencies may have that would aid NIOSH in its evaluation of the potentially hazardous substance or situation.

CURRENT INTELLIGENCE BULLETINS

The Current Intelligence Bulletin is the primary product of the Current Intelligence System. The Bulletins are longer and more detailed than the Mini Bulletins and they often contain a summary and evaluation of all the currently available data along with recommendations for action.

The Current Intelligence Bulletin is based on the evaluation of new information on a particular hazard in light of other known epidemiology, production, and use data. As part of this evaluation, an estimate of the number of persons occupationally exposed is developed, the occupations and industries involved are defined, and the characteristics of the chemical or hazard and its potential impact on occupational safety and health are summarized. In addition, industrial hygiene practices are recommended to minimize worker exposure. Accuracy and speed, in that order, are emphasized in issuing bulletins. To remain responsive to the needs of NIOSH and the occupational health community, the review and evaluation process takes only 3 to 4 weeks, depending upon the nature of the hazard.

Once developed, the Current Intelligence Bulletin is forwarded to the Director of NIOSH with one of the following recommendations:

- Disseminate to NIOSH staff and key Federal agencies only. This is recommended when the hazard has limited occupational significance, and is better addressed by other Federal agencies.
- Disseminate to the general occupational health community and others as appropriate. This is recommended only if there appears to

be a substantial occupational health impact.

- Do not disseminate further as the information is deemed insufficient to warrant further distribution.
- Refer information for additional NIOSH research to assess the occupational significance or impact.

DISTRIBUTION OF CURRENT INTELLIGENCE BULLETINS

The Occupational Safety and Health Act of 1970 created the National Institute for Occupational Safety and Health in the Department of Health, Education, and Welfare and the Occupational Safety and Health Administration in the Department of Labor. Briefly, NIOSH is a research and OSHA is a regulatory organization. Among NIOSH's responsibilities is that of recommending appropriate action to OSHA for correcting occupational health and safety problems. Therefore, prior to release of a Current Intelligence Bulletin to the occupational health community, the NIOSH Director forwards a memorandum to the Assistant Secretary of Labor for Occupational Safety and Health, including a copy of the Current Intelligence Bulletin along with recommendations for OSHA actions, such as an emergency temporary standard.

Other Federal agencies and affected industry and labor groups also receive the Current Intelligence Bulletin prior to general distribution to the occupational health community.

So that the people and organizations involved with the hazard are notified, those who should receive a specific Bulletin are identified during the document's development. These persons and organizations, along with a basic mailing list of 2,000 persons prominent in the occupational health and safety field, receive the Bulletin. The number of Bulletins distributed via mailing lists has ranged from 3,000 to 20,000. Following the initial mailing, additional copies are distributed as a result of a large number of individual requests. Care is taken in selecting recipients because the Bulletin's impact

might diminish if people are inundated with Bulletins dealing with hazards in which they may not be interested.

The information in the Current Intelligence Bulletins receives wider dissemination through publications of professional and labor organizations, as well as other special interest groups. In addition, Bulletins are often included by indexing and abstracting services and are eventually included in various computerized information services. This widespread distribution stimulates not only further research on a particular substance or process, but also the investigation of alternatives to replace the hazardous substance.

IMPACT

The Current Intelligence Bulletin has been well received by industry and labor, with a demonstrated impact on both the regulatory functions of goverment agencies and on the occupational health community throughout the world. For example, the October 1976 issuance of a Bulletin on nitrosamines in cutting fluids resulted in an international meeting held in Montreal, Canada, in May 1977, to discuss the problem. NIOSH was one of the invited participants.

Another example stemmed from the expertise gained by NIOSH during preparation of a Current Intelligence Bulletin on polychlorinated biphenyls (PCB's). The Environmental Defense Fund asked NIOSH's Technical Evaluation and Review Branch to offer expert testimony before the Environmental Protection Agency regarding PCB's and their possible relationship with human cancer. In a third example, after issuance as a Current Intelligence Bulletin, the information prepared on an explosive azide hazard was later presented at the National Meeting of the American Chemical Society in March 1977.

A Current Intelligence Bulletin concerning phenyl-beta-naphthylamine (PBNA) has sparked interest in metabolic pathways, and has lent a new perspective to controlling and regulating metabolic precursors of known human carcinogens. Data concerning PBNA demonstrated that substances believed to be

relatively innocuous may be converted by the human body into carcinogens—in this case, beta-naphthylamine (BNA), a known human bladder carcinogen. As a result of the PBNA Bulletin, NIOSH recommended to OSHA that materials which can be metabolized by the human body into known carcinogens should be handled in the same manner as carcinogens.

SUMMARY

The purpose of the Current Intelligence System is to promptly review, evaluate, and supplement new information received by NIOSH on occupational hazards that are either unrecognized or are greater than generally known.

As warranted by this evaluation, the information is capsulized and disseminated to NIOSH staff, other government agencies, and the occupational health community, including labor, industry, academia, and public interest groups. With respect to currently known hazard information, this system also serves to advise appropriate members of the above groups of recently acquired specific knowledge which may have an impact on their programs or perception of the hazard. Above all, the Current Intelligence System is designed to protect the health of American workers and to allow them to work in the safest possible environment.

This publication is based on a paper presented by Dr. Roscoe M. Moore, Jr., at the Twentieth Annual Safety Institute at the University of Rhode Island on April 14, 1977. Dr. Moore is Chief of the Technical Evaluation and Review Branch, Office of Extramural Coordination and Special Projects, National Institute for Occupational Safety and Health.

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