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Highlights of This Issue

- Occupational physicians to play major role in flu immunization program..... Page 1
- ~~OSHA in the courts: inspections, penalties under attack..... Page 2~~
- ~~Asbestos industry urges standards delay—or 2-fiber limit..... Page 2~~
- ~~Dr. Weill says evidence supports safety of 2 fibers, but nothing is certain..... Page 3~~
- ~~Children of lead smelter workers in Memphis require chelation therapy..... Page 4~~
- ~~NIOSH, company officials probe leukemia link to styrene-butadiene rubber..... Page 5~~
- ~~NCI to establish clearinghouse on environmental cancer..... Page 6~~
- Sen. Garn asks Mathews to halt transfer of NIOSH employees from Salt Lake City..... Page 6

OCCUPATIONAL PHYSICIANS TO PLAY MAJOR ROLE IN FLU IMMUNIZATION PROGRAM:

Occupational physicians are being counted upon by the Government to play a leading part in its program to vaccinate as many Americans as possible this year against the swine strain of influenza, which was said to be responsible for the 1918 pandemic and which HEW believes may recur this winter. Or it may not. But at any rate, the Government has made a decision to go ahead with the mass vaccination program as a precaution, even though some express reservations about whether the all-out plan is needed. (They include the New York Times, which editorialized against it.)

Pending final approval by Congress, which is expected without any trouble, the details of participation by industrial physicians have not been worked out. Dr. John F. Finklez, director of NIOSH, is expected to disclose many of the details in his address to the American Occupational Medical Association meeting in Cincinnati April 27.

Dr. George Franck, associate general medical director of Western Electric Co., Atlanta, and treasurer of AOMA, attended a planning meeting of national organizations and state health officers at the Center for Disease Control in Atlanta April 2, as a representative of both AOMA and the Bell System. At the meeting the virology was reviewed, as well as the steps which led to the decision to go ahead with the program. Several state health officers reportedly expressed apprehensions that the short deadlines made the full success of the program difficult to predict.

When AOMA meets in Cincinnati, it will have before its House of Delegates a resolution pledging cooperation with the program, to be presented by its Speaker, Dr. Charles Rushmore of Indiana Bell Telephone Co. The House is expected to approve it without difficulty, laying the groundwork for participation by occupational physicians.

Four drug companies have expressed an interest in producing the vaccine. They are Wyeth, Parke-Davis, Merck & Richardson-Merrell. They expressed confidence that production goals could be met but some expressed doubt that the \$100 million earmarked for the program just to buy the vaccine would be enough.

Another complication is represented in the short supply of the jet injector used to immunize hundreds of persons in an hour. One company, Vernitron Corp., Great Neck, N.Y., holds the patent for the jet injector, and only about 900 are believed to be in existence now. It is estimated that at least twice that many jet guns will be needed. Vernitron said it was taking steps to meet the demand for the gun, which costs about \$1,300. It uses a forced air technique instead of a needle to inject the vaccine, and thus the skin is not broken and the possibility of contamination is minimized.

Because few Americans have antibodies against the swine strain from the 1918 pandemic, the possibility

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of cross-infection would not seem to be great. Nevertheless, the Government is recognizing that individuals with allergies or hypersensitivity to eggs not be vaccinated.

Unlike the U.S., Great Britain is preparing to vaccinate only the high-risk groups this year: the elderly, the ill and those whose occupations make them essential to functioning of public services.

OSHA IN THE COURTS: INSPECTIONS, PENALTIES UNDER ATTACK:

The U.S. Supreme Court has been asked by OSHA to review an unusual case which goes directly to the heart of OSHA's way of conducting inspections of businesses. As such, it is being awaited and watched with extraordinary interest.

In October 1974, two OSHA inspectors entered the store in Plano, Tex., of Gibson's Products, Inc., a franchised discount chain with 650 units, which sold a wide variety of consumer products at retail—more like a variety store than anything else. The inspectors told the manager that they wanted to walk around the non-public areas where employees were working. The manager refused.

OSHA sued and asked the court to order Gibson's to let the inspectors in. It cited a provision of the Occupational Safety and Health Act which authorizes its inspectors, "upon presenting appropriate credentials, to enter a workplace without delay and at reasonable times."

Gibson's defended its refusal to allow the inspectors in because it contended such a provision in the Act violated the 4th Amendment to the Constitution, which states that the Government cannot obtain a warrant unless a judge receives sufficient evidence to establish "probable cause" that a law is being violated, and that without the warrant, the government cannot enter private premises.

The Federal Court in Sherman, Tex., upheld the company and ruled that OSHA inspectors could not enter the premises without a warrant. Federal Judge Thomas Gee ruled that "administrative expedience" could not take precedence over the 4th Amendment. He could have voided the inspection provision in the law; instead, he said that Congress must have intended to impose on OSHA the burden of seeking warrants.

In seeking a Supreme Court review, OSHA lawyers said the decision, if upheld, could be a serious "barrier to the elimination of work-site dangers to the health and safety of working people."

Benjamin Mintz, associate solicitor for OSHA, contends that there is precedent for OSHA's position upholding random inspections without warrants. In particular, he cited a 1972 Supreme Court ruling which affirmed the right of the Government to inspect licensed gun dealers without warrants for possible violations of law.

But Judge Gee considered the gun case rulings and held that they did not apply to OSHA. He ruled that the gun statutes applied to only one industry. OSHA, by contrast, deals with industry at large.

In another equally important case, the Supreme Court has agreed to review the appeals of Frank Irej, Jr., a construction contractor of Morgantown, W. Va., and Atlas Roofing Co., Atlanta, who have contended that imposition of penalties by OSHA inspectors is a violation of the 7th Amendment, which guarantees every person the right to a jury trial.

Both were cited for violation of safety laws and proposed penalties were imposed. They did not contest the fact that they were guilty of safety violations but contended in their court appeals that they had a right to a jury trial before fines were imposed. The provisions in the law for an appeal to the Occupational Safety and Health Review Commission do not remove the right for a jury trial, they say. The law gives OSHA the right to conduct inspections and recommend penalties and establishes maximum penalties according to gravity of the offense, but it does not correlate a specific penalty with a specific violation.

Both cases have clear implications beyond OSHA. They could directly affect the right of any government agency, presumably, to conduct random inspections or impose fines.

ASBESTOS INDUSTRY URGES STANDARDS DELAY—OR 2-FIBER LIMIT:

The asbestos industry has asked that a final standard for occupational exposure to asbestos by manufacturing industry employees be postponed until after the standard for construction industry exposure is proposed and its potential impact measured.

In comments filed with OSHA prior to its April 9 deadline, the Asbestos Information Association/North America said that if such deferral is not possible the industry recommends adoption of a permanent

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exposure standard of 2 fibers per cc. of air, time-weighted average, with a ceiling limit of 10 fibers, using the membrane filter test method.

OSHA's proposed standard is for a TWA limit of 0.5 fibers, reduced from its original proposal of 2 fibers.

AIA said it could not be possible to analyze adequately the effect of the proposed standard on asbestos manufacturing without simultaneously considering the effect on the construction industry, which consumes 70 to 80 percent of all asbestos manufactured in the U.S.

"It would be a Pyrrhic victory to achieve a viable manufacturing regulation, only to discover that the construction regulation thereafter so threatened or damaged the manufacturers' markets that they could not continue to operate profitably," the statement declared.

Recognizing that a delay may not be possible or practicable, AIA took a fall-back position at a 2-fiber level, which was recommended in 1972 by OSHA, to take effect July 1, 1976.

"If a permanent standard of 2 fibers/cc. TWA was reasonable and appropriate in 1972, and we believe that it was, it remains reasonable and appropriate today," the industry commented. "The fact is that no new evidence has been developed which will support or justify a change in that standard.

"Our survey of the asbestos industry indicates that an exposure standard of 2 fibers/cc. TWA, with a ceiling of 10 fibers/cc.. is feasible technically and economically.

"At this time, the industry has not achieved a 2-fiber level at all processing steps; but the consensus of informed opinion within the industry is that control to that standard can be achieved by the application of Best Available Technology (BAT), being an optimum combination of human engineering techniques and carefully enforced work practices.

"With BAT in effect throughout the industry, there may be a few process steps which intermittently will exceed the 2 fiber level, but these incidents simply will have to be handled as emergencies. The 2-fiber level can be achieved in three to five years, although some portions of the secondary segment of the industry may require a somewhat longer period of time to attain a 2-fiber level of proficiency. Of course, during the three to five year period required to effect BAT, a constantly declining number of work stations will be operating over the 2-fiber level for decreasing percentages of the time."

AIA said that the cost of installing BAT will not be insubstantial "but indications are that, for the larger part of the industry, the annual cost of achieving the 2-fiber level can be added to the cost of products sold without significant adverse impact upon market position." Exceptions to this generality may be the asbestos textile and friction products industries, as well as certain portions of the secondary industry segment, it said.

The industry's comments, signed by Guy George Gabrielson, Jr., chairman of the Asbestos Industry Task Force, were based on reports of two consultants: Roy F. Weston, Inc., West Chester, Pa., for technological and economic feasibility of the proposed regulation, and Dr. Hans Weill, Professor of Medicine at Tulane School of Medicine, on the health effects. A separate article on Dr. Weill's report follows.

DR. WEILL SAYS EVIDENCE SUPPORTS SAFETY OF 2 FIBERS, BUT NOTHING IS CERTAIN:

Dr. Hans Weill, Professor of Medicine at Tulane University School of Medicine, and consultant to the Asbestos Information Association/North America, has filed a statement with OSHA declaring that the weight of scientific evidence in the literature and elsewhere give encouragement to the safety of a 2-fiber standard, but that neither that level nor the 0.5 limit proposed by OSHA can provide foolproof assurance that the occupational environment will be totally free of health hazards.

Dr. Weill, a well known consultant in occupational exposures, said he was asked by AIA to prepare "an objective, scientific assessment of the literature cited by OSHA in support of its proposed standard change."

"I accepted this consultative task because I firmly believe that industry, in order to meet its occupational health responsibilities, must have available to them outside advice from academic and other sources. It is my objective... to provide scientifically-based and dispassionate judgments on the issues raised and in no way assume an advocacy or adversary position."

He said, first, that there should be "little debate concerning the causal association between occupational exposure to asbestos dust and certain adverse health effects, including but perhaps not limited to asbestosis, bronchogenic carcinoma of the lung, mesothelioma of the pleural and peritoneal surfaces, and gastrointestinal neoplasms." That much is agreed upon, he said.

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Instead, he concentrated on what he said were OSHA references to new information which has become available since 1972. He traced reports published by Prof. Richard Doll of the Oxford Epidemiology Unit in Britain to show that those entering the asbestos industry since asbestos regulations took effect have experienced lower cancer mortality rates from lung cancer than those who preceded them. Based on follow-up visits and studies by Dr. Weill at a British asbestos textile plant cited by Prof. Doll in his earlier report, he said there was "encouraging preliminary evidence in regard to the safety" of a 2-fiber standard for average exposure.

"Often not recognized, particularly in the U.S., is the fact that the current British asbestos standard of 2 fibers per ml is not based on the Doll mortality studies discussed previously," Dr. Weill said. "The standard is the result of a recommendation by the British Occupational Hygiene Society published in 1968. This standard of 2 fibers per ml for chrysotile asbestos was suggested by the BOHS subcommittee on asbestos after review of morbidity data provided by Dr. John Knox, medical director of this same British asbestos textile plant."

He criticized the data presented by Dr. Joseph K. Wagoner of NIOSH on mortality in gold mines and said the report had been subjected to revisions. It was, like others in the Weill analysis, cited by OSHA in proposing revision of its standard. Dr. Weill concluded:

"It seems to me that there are two major alternatives presently available in the setting of an occupational standard for asbestos exposure. The first depends upon the premise that the adverse health effects demonstrated in workers have resulted from high but poorly quantitated levels of asbestos dust. Where such information is available, dose-response relations have indicated that for mortality from malignant disease and for asbestosis, these risks were associated with levels of exposure considerably higher than the current or proposed standards.

"That a working population has not had long-term exposure to even current standard levels of exposure has already been emphasized. In the absence of such epidemiologic data, one can hardly find convincing evidence on which to base present further lowering of the asbestos standard. Nor can these non-existent data invalidate the 1976 standard of 2 fibers per ml. Because no population has been available whose working lifetime exposure has averaged 2 fibers per ml, one cannot finally conclude at this time that this level is 'safe' in regard to all health effects recognized to be associated with asbestos exposure, in all exposed individuals.

"However, it is also impossible to state that the proposed average exposure of 0.5 fibers per ml for a working lifetime is free of these health hazards. However, the limited information available from studies on both sides of the Atlantic, which attempt to define dose-response relationships, is encouraging in regard to a 2-fiber per ml standard.

"The other alternative depends upon the following argument. Occupational exposure to asbestos at some level has been shown to be associated with a carcinogenic risk. Since a safe threshold level of exposure cannot be scientifically proven at this time, the standard must require that all exposures be at or below the lowest technologically feasible level.

"The implications of this approach, vis-a-vis the multitude of carcinogenic materials in our environment, are far-reaching and must be faced. Those who favor this alternative must vigorously support a uniform approach and defend the resulting consequences on life in our society. I favor the first alternative as being prudent and protective of the worker's health in light of the best available current scientific information."

CHILDREN OF LEAD SMELTER WORKERS IN MEMPHIS REQUIRE CHELATION THERAPY:

Seven children of workers in a secondary lead smelter in Memphis had such high levels of lead intoxication that they required hospitalization and chelation therapy. The company was the Memphis Smelting & Refining Co., which had been under an OSHA citation for violation of ambient air standards and for failing to require respirators. It was shut down temporarily in January to make necessary improvements.

The details of the investigation were reported by a team headed by Dr. George S. Lovejoy, Memphis-Shelby County Health Officer, and including representatives of the state health department and Center for Disease Control and published in CDC's Morbidity and Mortality Report of March 26. Additional details were provided us in interviews.

The company itself reported blood lead levels of 200 micrograms in three workers to the state health department, which then requested the city-county health department to test all employees. It was assisted by CDC and NIOSH as well as the University of Tennessee Medical Units.

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In November 1975 symptoms and signs of lead toxicity were seen in workers in the smelter, and evidence of excessive lead absorption was also found in 50 of the 102 children of workers, they reported. The contaminated clothing of the parents was apparently the source of the exposure to the children. Many of the homes were new and had no peeling paint or other source of environmental lead.

Seven children, all under the age of six, required hospitalization and chelation therapy. They had lead levels greater or equal to 80 micrograms per 100 milliliters and/or erythrocyte protoporphyrin levels greater or equal to 190 micrograms per 100 milliliters. Two infant children of smelter employees, both four-month-old boys, had blood lead levels of 50 and 52 micrograms per 100 ml, with EP values of 92 and 185 micrograms, respectively.

The children were screened routinely as part of the city-county health department's Childhood Lead Screening Program. When the fingerstick tests revealed high blood lead levels, they were hospitalized through the health department. Only three of the seven were symptomatic.

By contrast, in the census tract adjacent to the smelter, 13 (6%) of 228 children one to five years old had blood lead levels greater or equal to 30 micrograms per 100 ml. In another socio-economically similar industrial area of Memphis having no lead production facility, 38 (12%) of 307 children had lead levels greater or equal to 30 micrograms.

Fifty-three (68%) of 78 workers tested had blood lead levels greater or equal to 60 micrograms, the range considered by NIOSH to represent unacceptable lead absorption posing a risk to health. Thirty workers (36%) had two or more symptoms of lead poisoning, including abdominal pain, gastrointestinal dysfunction, muscular weakness, tremor, anorexia, joint pains and fatigue. Peripheral neuropathy, indicated by weakness of wrist extensors, was seen in 10 workers. Anemia, defined as a hemoglobin level below 14 grams per 100 milliliters, was seen in 11 workers. Anemic workers had significantly higher blood lead and EP levels than non-anemic workers, thus identifying the anemia as lead-related, the investigators reported. Elevations in BUN above 20 milligrams per 100 ml were seen in six employees. Arsenic levels in urine were elevated in 10 of 72 workers, with the highest levels seen in workers in the casting area where arsenic was added to molten lead.

An editor's note in the CDC report added: "Members of workers' families associated with industries other than those dealing with lead have been known to become ill following exposure to toxic materials transported from factory to home on work clothing. Asbestosis, berylliosis and chloracne are examples of other occupational diseases transmitted in this fashion. Such reports emphasize the importance of improved work practices and engineering controls not only in safeguarding worker health but also in shielding families of workers from contact with toxic industrial materials."

NIOSH, COMPANY OFFICIALS PROBE LEUKEMIA LINK TO STYRENE-BUTADIENE RUBBER:

The Government, industry and labor are all engaged in what one hopes is a coordinated approach to determining whether there is a connection between several cases of leukemia and exposure to synthetic rubber production, notably among workers in styrene butadiene rubber (SBR facilities).

The investigation has been launched in the wake of two major developments:

(1) Disclosure by B.F. Goodrich and Texas-U.S. Chemical Co. of several cases of leukemia at their synthetic rubber plants in Port Neches, Tex. since 1966.

(2) A report in the March issue of the Journal of Occupational Medicine by Dr. A.J. McMichael of the University of North Carolina, which has a contract with the United Rubber Workers, pointing to an increase in leukemia mortality in the synthetic rubber industry, including an unidentified plant in Akron, Ohio. (We understand this is the Firestone Co.)

Dr. M.N. Johnson, medical director of Goodrich, said that a 59-year-old man employed at the Port Neches plant died in February, two others died of the disease since 1971, and a man who had left the plant for another job died in 1966. In addition, another worker is currently under therapy for leukemia.

Dr. Houston Hanby, medical director for a number of plants in the highly concentrated chemical industry in the Port Neches area, including Texas-U.S. Chemical, said records at that company show that one worker died of leukemia in 1971, another in 1946 and a third has leukemia in remission.

No body is yet claiming a connection between styrene-butadiene rubber, but NIOSH has made a quick investigation, then sent a team of microfilm technicians to copy the records and to work with the Texas and nearby Louisiana health departments. In addition, NIOSH is contacting both the companies and the labor unions involved.

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The problem is enormously complicated because more than 100 chemicals are in common use in the area, and separating the incriminating agent or agents will prove formidable. NIOSH, for one, is giving its epidemiological studies of the subject very high priority. Benzene is one of the few chemicals which have been linked in high concentrations to leukemia, but doubt has been expressed about the extent of benzene exposure in Port Neches.

Both Goodrich and Texas-U.S. have offered complete blood count tests to all workers who wish to receive them. Goodrich employs about 670 hourly and salaried workers there and Texas-U.S. about 400. However, it has been estimated that about 3,400 employees have worked at some time in the Goodrich plant, and about 1,125 at Texas-U.S.

A couple of other factors are worth noting. Jefferson County, where the facilities are located, has a leukemia rate higher than that of the entire state of Texas, according to demographic studies by the National Cancer Institute. Jefferson and adjoining counties have among the highest cancer rates in the nation. In addition, when leukemia clusters were reported in a few U.S. communities a decade ago, for which there has yet been no accepted explanation, one of the communities was Port Arthur, Tex., which happens to be located near Port Neches.

NCI TO ESTABLISH CLEARINGHOUSE ON ENVIRONMENTAL CANCER:

A national clearinghouse of information on actual or suspected environmental carcinogens will be established shortly by the National Cancer Institute, says Dr. Frank Rauscher, NCI Director.

The clearinghouse would include experts from NCI and other appropriate Government research and regulatory agencies—including NIOSH, NIEHS, FDA, EPA and OSHA, among others.

It would have several important functions: to help set priorities for testing chemicals which may have a potential for carcinogenicity, to coordinate the efforts of agencies with overlapping responsibilities for detecting and controlling carcinogens and to release the information as soon as possible—meaning frequently before publication in a scientific journal.

To the possibility of alarming the public unnecessarily, Dr. Rauscher replied:

"I'd rather have the public scared than uninformed."

NCI is currently testing about 450 chemical substances found in industry for possible carcinogenicity. The tests on each chemical take two to three years.

Meanwhile, a National Academy of Sciences panel headed by Dr. Charles Shaw of the University of Texas-M.D. Anderson Hospital is continuing its study of feasible ways of informing workers about possible hazards they face.

SEN. GARN ASKS MATHEWS TO HALT TRANSFER OF NIOSH EMPLOYEES FROM SALT LAKE CITY:

Sen. Jake Garn (R-Utah) has urged HEW Secretary David Mathews to halt or delay the planned transfer of scientists from NIOSH's Western Area Lab in Salt Lake City to its Appalachian lab in Morgantown, W. Va. About 20 professional employees at the Salt Lake facility would be affected by the transfer, with a phased closedown of the Utah program planned.

Dr. John F. Finklea, NIOSH director, notified the employees of the transfer in an action which took them by surprise and was subsequently criticized by some of them as too abrupt and insensitive. The AFL-CIO reportedly plans to contest the move in Congressional appropriations committees.

In his letter to Mathews, Sen. Garn said he has found "a number of conflicting impressions" about the move and asked him to stop it at least until the Senator and others can be briefed by "appropriate NIOSH officials."

"The people working at the NIOSH facility are dedicated scientists and public servants and they certainly deserve to have timely and factual information regarding any change in their status," Garn wrote.

He said that the employees did not expect the transfer and that it appears to be "capricious and arbitrary." He said it is also rumored in Salt Lake City that the laboratory facility will be closed but that NIOSH officials in Washington say the lab will remain open and perhaps expand its operations. The latter is news to NIOSH officials we contacted.

"It is this type of action that will give government operations a black eye and result in more mistrust of government officials," Sen. Garn said. "A method needs to be developed whereby significant changes,

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such as this, are presented to the public and their elected officials in a timely, responsible manner so that reasons for the action are clear. Only in that way can it be determined if the effect will be positive and in the best interest of our constituents."

He added that the closure of the Internal Revenue Service's appellate office in Salt Lake City was handled in much the same way as the NIOSH move, "with few of the people concerned or their elected officials being given accurate information about the reasons for and effects of the change."

NACOSH NOMINATIONS, ANYONE?

OSHA is seeking nominations for membership on its National Advisory Committee on Occupational Safety and Health (NACOSH). The current terms of six members of the 12-member committee expire June 30. Vacancies will be in the following categories:

One employee representative, one employer representative, one safety representative, three public representatives (one of whom will be designated as chairperson). Terms of office are two years.

OSHA says that any interested person or organization may nominate one or more qualified persons for membership. Nominees should be identified by name, occupation or position, address and telephone number, specifying the field or group which the candidate would represent and including a resume of the nominee's background, experience and qualifications. In addition, the nomination should state that the nominee is aware of the nomination and is willing to serve as a committee member.

Nominations should be submitted by April 30 to Joanne Goodell, Chief, OSHA Committee Management Office, Room N-3633, Department of Labor Building, 3rd St. & Constitution Ave., N.W., Washington, D.C. 20210.

KEPONE FOUND TO CAUSE LIVER CANCER IN EXPERIMENTAL ANIMALS:

The chlorinated insecticide Kepone has been found to cause a form of liver cancer in tests with both rats and mice, according to a report by the National Cancer Institute. Exposure to Kepone, manufactured at the now-defunct Life Sciences Products Co. plant in Hopewell, Va., has been linked to neurological disturbances and sterility among former workers there in tests conducted by Medical College of Virginia investigators (*OCCUPATIONAL HEALTH & SAFETY LETTER*, March 8).

The tests were part of a continuing NCI program to screen chemicals for carcinogenicity in animals under specific conditions. NCI said the findings are considered definitive for the animal studies but predictions of human risk are "not possible on the basis of these studies alone."

Chlorodecone (Kepone) was selected for carcinogenicity testing by NCI because of its chemical structure as one of a series of halogenated chemicals related to known or suspected carcinogens, its presence in human general and occupational environments and its tendency to be stored in body tissues. Not mentioned by NCI as a reason for its selection, but certainly a factor, was the national publicity generated by the Kepone exposure cases in Virginia.

The hydrated form of technical grade chlordecone was administered in feed to both rats and mice, males and females of each species, and at two dose levels. About 50 animals were placed in each of the eight treatment groups. Control animals were maintained under the same conditions but not given the chemical.

Treatment with Kepone lasted for 80 weeks for both rats and mice. The animals were observed until scheduled termination of the test, at 90 weeks after start of treatment for mice and 112 weeks for rats. A detailed microscopic examination of tissue samples was performed on all animals in the study.

At the higher dose level, 88 percent of male mice (43 out of 49) and 47 percent of female mice (23 of 49) developed liver cancer. At the lower doses, 81 percent of male mice (39 of 48) and 52 percent of female mice (26 of 50) developed liver cancer. Among control mice, 16 percent of males (8 of 49) but none of the females developed liver cancer.

With rats at the higher dose level, cancers were seen in 7 percent of males (3 of 44) and in 22 percent of females (10 of 45). At the lower dose levels, neither male nor female rats exhibited a significant increase in liver cancer incidence, although one of each group developed liver cancer. No liver cancers were seen in any of the control rats.

In diagnosing the tumors, NCI pathologists defined as hepatocellular carcinomas all those judged to have

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potential for progressive growth, invasion, metastasis and death in the host animals.

Besides liver cancer, investigators observed other abnormal conditions in the treated animals. Extensive non-cancerous liver damage was found in treated animals of both species. Male mice at high doses had severe tremors, and some were observed to be highly excitable during the second year of the study. (These findings bore a striking resemblance to conditions found in the Hopewell workers.) Treated rats displayed rough coats and skin damage during the second year and became anemic. Treated rats that survived were generally in poor condition.

The NCI report said: "The results of this study clearly suggest that technical grade chlordecone, as administered under the test conditions described, induced hepatocellular proliferative lesions, including hepatocellular carcinomas, in both sexes of rats and mice."

Copies of the report are available from the Office of Cancer Communications, National Cancer Institute, Bethesda, Md. 20014. A detailed technical report is currently in preparation.

NIOSH SEEKS INFORMATION ON PERSONAL PROTECTIVE EQUIPMENT:

NIOSH is soliciting help in carrying out its mandated task of developing and establishing recommended standards on health and safety personal protective equipment. It wants specific technical data regarding the performance of industrial personal protective equipment including, but not limited to, the following types of protective equipment:

Head, eye and face, hearing, foot and toe, respiratory, hand and body.

Of particular interest is information dealing with equipment failure or defects that would indicate the need for improved standards or test procedures. Both lab and workplace data are needed for review and evaluation to better enable NIOSH to develop recommendations in criteria documents and to plan and conduct necessary research. Specific suggestions for improved standards or test procedures are also solicited.

All information should be forwarded by June 5 to the Associate Director, Appalachian Laboratory for Occupational Safety and Health, NIOSH, 944 Chestnut Ridge Road, Morgantown, W. Va. 26505.

NRC STUDY FINDS MINIMAL HAZARD TO AIRPORT WORKERS HANDLING RADIOACTIVE CARGO:

The Nuclear Regulatory Commission staff has released a review of six studies of radiation exposures to cargo workers at six major airports from packages of radioactive materials. The review is by Dr. Jacob Shapiro of Harvard, one of the contractors in the studies.

Results of the studies indicate that no workers would receive exposures in excess of the maximum permissible limit of one-half rem per year for individuals not employed as radiation workers. The limit for radiation workers is ten times higher.

Most workers who participated in the studies were expected to receive exposures of less than one-tenth rem per year as a result of handling cargo containing radioactive materials. One-tenth rem is comparable to the average exposure per year of individuals in the U.S. to radiation from natural background sources.

While exposures to cargo handlers do not appear excessive, the studies revealed that some exposures were the result of incidental contact with packages and therefore unnecessary. Such exposures can be minimized, according to the review, by improving procedures for placement and handling of packages in cargo areas and airplane cargo holds.

The studies were performed at airports in Boston, Chicago, Los Angeles, New York, San Francisco and St. Louis. They began in November 1974 and covered 125 airport cargo workers and more than 1500 packages of radioactive materials. Descriptions were obtained of the handling and arrangements of packages, and estimates were made of exposures received by workers based on time-motion studies and supported by actual readings from radiation monitoring devices worn by workers.

CONFIDENTIAL-SUBJECT TO COURT ORDER NEW PUBLICATION FOCUSES ON FOOD & DRUG ADMINISTRATION:

A new bi-weekly publication, "The Food and Drug Letter," was launched April 1 to provide in-depth analysis and understanding about major regulatory and legislative issues affecting the food, drug and cosmetics industries. Publisher is David Swift, who founded "Product Safety Letter" in 1972. Offices are at 1080 National Press Building, Washington, D.C. 20045; (202) 393-3830.

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