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ASBESTOS STANDARD OF 2 FIBERS RECOMMENDED: 2 f/m³

Workers should be exposed to an average of no more than 2 fibers of asbestos per eight-hour day, not more than a peak concentration of ten fibers per day, both based on a minimum sampling time of 15 minutes.

That recommendation came from the National Institute of Occupational Safety and Health in its criteria package for asbestos, submitted to the Labor Department and discussed by the five-member Advisory Committee on Asbestos Feb. 3.

Medical surveillance should be required for any exposure exceeding 1 fiber, NIOSH recommended. Such surveillance should include pulmonary function studies, medical histories, physical examinations (including xrays, evidence of finger clubbing and other symptoms suggestive of early asbestosis).

Many other considerations were included in the 126-page criteria document. NIOSH recommends standards based on the health data, but it is up to the Labor Department's Occupational Safety and Health Administration to decide whether to adopt them.

An emergency standard of 5 fibers was issued Dec. 7. Hearings on the proposed permanent standards begin March 14 in Washington's Departmental Auditorium.

Even before the NIOSH criteria package was submitted, however, an asbestos industry spokesman warned the Government that it could not rely on industry cooperation if a standard below 5 fibers was adopted.

Matt Swetonic of the Asbestos Information Association told a meeting of industry representatives and national trade associations convened by OSHA that industry could not support a level of 2 fibers and questioned whether medical evidence really supports lower standards. Dr. John Welsh, medical director of Union Carbide, said industry is finding it difficult to meet the emergency standard of 5 fibers and expressed the hope that it would go no lower. He also felt that fibers smaller than 1.2 micron should be considered in the standard-setting. Dr. Welsh also quoted Dr. Irving Selikoff of Mt. Sinai Medical Center in New York as telling him that the original TLVs for asbestos were unfortunately unrealistic and consequently were never adhered to by the bulk of the industry.

A common theme of comments by industry at the meeting was that they were being excluded from the standard-setting process and wanted more input before the standards were set, not after.

The Asbestos Advisory Committee, which met Feb. 3 and will hold several other meetings on the proposed permanent standards before the hearings begin March 4, consists of:

Edwin C. Hyatt, Industrial Hygiene Group Leader, Los Alamos (N.M.) Scientific Lab, chairman; Jack Baliff, industrial hygienist, New York State Department of Labor; Dr. Joseph K. Wagoner, Director, Division of Field Study and Clinical Investigation, NIOSH, Cincinnati; Isaac Weaver, Director of Environmental Controls, Raybestos-Manhattan Corp., Manheim, Pa.; Andy Haas, Safety Director, Asbestos Workers International Union, Washington, D.C.

GEORGIA COMPANY CONTINUES TO MANUFACTURE CARCINOGEN:

Beta-naphthalamine, a demonstrable carcinogen which has been known to cause bladder cancer in workers who handle it, is still being produced by the Augusta Chemical Co., Augusta, Ga., even though many states and other countries have long banned its manufacture.

The plant was recently visited by representatives of H.W.'s National Institute of Occupational Safety and Health, acting on their own initiative on the basis of information supplied to them. The company is non-union, the 40 or so workers having twice rejected union representation in elections.

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The company previously operated under another name in Pennsylvania but closed down after the state banned (later modified) manufacture of beta-naphthylamine, which is on the list of proven carcinogens of the American Conference of Government Industrial Hygienists. Its manufacture has also been publicly disapproved by chemical industry trade associations.

The substance is used as an intermediate in the synthesis of dyes for cellulose materials, including textiles. The worker is affected by its handling, but not the consumer of the finished product, everyone agrees.

NIOSH is planning to microfilm the personnel records of the employees at the plant and, if the plant is still existing, may ultimately arrange for medical examinations. However, even if the medical exams proved entirely negative, there would be little cause for comfort as long as the plant continued to manufacture the carcinogenic substance.

The company is owned by Synalloy, Inc., and its principal customer is Blackman-Uhler Chemical Co., Spartanburg, S.C., with which it reportedly has interlocking ownership.

Note: The Government might find it difficult to move against the company, oddly enough. Georgia does not have a regulation banning its manufacture and there is as yet no approved standard for organic amines, including carcinogens. Everyone agrees that the standard should be zero, but scientists are in some disagreement on whether a carcinogen could be manufactured if there is no body contact.

TEXAS ASBESTOS FIRM FINED \$6,990 ON RE-INSPECTION:

A combination of union pressure and publicity has prompted a re-inspection of an asbestos insulation plant in Tyler, Tex., resulting in a fine of \$6,990 for failure to correct a series of violations of health and safety regulations (*OCCUPATIONAL HEALTH & SAFETY LETTER, Jan. 22*).

The plant is owned by the Pittsburgh-Corning Corp. and is scheduled to be closed by the end of February. It has about 60 workers and has been kept open thus far only to fill a top-priority order from the Navy for the thermal pipe insulation.

The original citation was issued Dec. 16 by the Dallas regional office of the Labor Department's Occupational Safety and Health Administration. It imposed a \$210 fine, mentioning dust, failure of employees to wear respirators, etc., but nowhere, to the amazement and consternation of the Oil, Chemical and Atomic Workers union, did it mention over-exposure to asbestos, which the union contends is flagrant.

After heated protests and publicity, the plant was re-inspected quietly on Jan. 13 and a "notification of failure to correct violations" was issued on Jan. 17, along with a fine of \$6,990 (a major one by Labor Department standards). The notification mentioned the individual citations, even though the inspector reportedly indicated that the company had complied with the immediate recommendations.

Last October a team of NIOSH investigators headed by Dr. Joseph Wagner reported finding average concentrations of 75 fibers in mixing operations and a maximum of 189 fibers. By contrast, the emergency asbestos standard proposed by the Labor Department calls for a maximum exposure of 5 to 10 fibers.

They found one mesothelioma death definitely attributed to asbestos exposure and in seven out of 18 workers with ten or more years of employment they found evidence of asbestosis.

INDUSTRIAL PHYSICIANS BEGINNING TO WORRY ABOUT THEIR ROLES:

Industrial physicians are beginning to wonder whether, and to what extent, they will have roles to play in the implementation of the Occupational Safety and Health Act of 1970.

The debate has been confined pretty much to corridor chatter thus far, but may well emerge on the floor during the annual meeting of the American Academy of Occupational Medicine at the Pittsburgh Hilton Hotel Feb. 9-11. High on the agenda's a discussion of the law.

The emphasis thus far has been on safety and, more recently, on industrial hygiene. Even allowing, of course for the compatibility of interests of industrial hygienists and industrial physicians (their bosses in many cases), the medics are wondering whether there will be any room for them. Not many in the Government have bothered to communicate with them on the subject, thus heightening their anxieties.

There is little room for argument that the standards being set and promulgated will require the active participation and counsel of physicians in industry, but the physicians themselves would like to see some evidence of it from the Government officials.

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Initially, the studies are epidemiological, including the evaluation of workers' health and disease patterns, based on death certificates, Social Security data, company records and union information. Eventually, it is expected to be followed by physical examinations of some workers, although the details of the clinical studies remain to be worked out.

Under terms of the negotiating agreement signed in 1970 in the rubber industry, the health studies are financed by company payments of up to 1.2 cent per man-hour worked. Peter Bonmarito, president of the Rubber Workers union and chairman of the Health and Safety Committee of the Industrial Union Department-AFL-CIO, commented:

"Our prime objective has been to make the working environment where the employee spends a major portion of his adult life as healthful as medical and scientific knowledge will accommodate." The rubber industry agreement may well serve to set the pattern for similar programs of millions of workers in other industries, he said.

BILL SEEKS SEPARATION OF CONSTRUCTION SAFETY STANDARDS:

Legislation which would require separate health and safety standards for heavy construction industry and light residential construction industry has been introduced by Rep. Charles Thone (R-Neb.) and 85 cosponsors.

Long sought by the construction industry, which contends that the single set of standards now in effect discriminates against single one-story builders, the legislation has been referred to the Labor Subcommittee of the House Education and Labor Committee, which has not yet scheduled hearings.

The bill (actually there are four identical bills because of the large number of cosponsors) defines light residential construction as being a building three stories or less with no elevator. It would amend the Occupational Safety and Health Act to require the Secretary of Labor to recognize the difference in hazards to employees of the two types of construction.

The insurance industry and other groups have long acknowledged that the hazards of workers in light construction are not nearly as great as those in heavy industry. Thus, says Thone, the light residential builder is at a disadvantage in being required to meet the more stringent standards.

NEW RULES ISSUED FOR HEALTH & SAFETY RECORD-KEEPING:

New amendments designed to provide more flexibility in employers' record-keeping and reporting of on-the-job injuries and illnesses have been published by the Labor Department.

The amendments resulted from petitions by employers for exceptions from record-keeping requirements of the Occupational Safety and Health Act of 1970. The modified rules, as published in the Federal Register, provide that:

- * Each employer must record occupational illnesses and injuries in a log (Form OSHA 100 or its equivalent) within six working days. The previous rule allowed only Form OSHA 100 and required completion within two days.

- * If the log is maintained in a computer or at a location other than the local establishment, which previous rules did not permit, an updated copy no more than 45 days old must be kept at the local establishment.

- * The supplementary record for each recordable injury or illness must be available in the establishment within six days of receipt of information that a recordable injury or illness has occurred. Form OSHA 101, or its equivalent, must be used. The previous requirement did not state a time limit.

Employers have also been reminded that they must prepare and post Form OSHA 102, an annual summary of occupational injuries and illnesses. The effective date for this requirement was Feb. 1. The summary should cover the July 1-December 31, 1971 period and must be posted for one month in a conspicuous place where other notices to employees are customarily placed. The necessary forms were mailed to employers last July. Employers were warned by Assistant Secretary George C. Guenther that failure to keep the necessary records or to post the annual summary may result in the issuance of citations and proposed penalties.

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Behind the disquiet is a growing uneasiness among many physicians about combining health and safety together—in the Government or in the plant. Recognizing that there are many interlaces between the two disciplines—none, to mention just one—many thoughtful physicians have expressed the view that they do not want responsibility for safety and that combining the two in industry under either medical or safety supervisors may well dilute the best of both.

Doubt is also being expressed, in that connection, about how many of the thousands of deaths and injuries resulting annually from on-the-job accidents could have been prevented by the presence or intervention of a physician. The consensus: very, very few.

Note: Would anybody care to do a survey on how many companies have combined health and safety directors since enactment of the national law, and whether the director is in the health or safety department, or neither? The findings should be interesting if anyone cared to do it.

MINIMUM FEDERAL STANDARDS FOR WORKMEN'S COMP SEEM LIKELY:

The National Commission on State Workmen's Compensation Laws will soon begin writing its report to Congress before going out of business—and it seems highly likely that a recommendation for uniform Federal standards for workmen's compensation will be made while the program continues to function under state control.

Two extreme positions are under consideration, and both are likely to be rejected. One would be to do nothing but perhaps recommend guidelines, of which there are already an abundance. Another would be to Federalize the program, putting it under Social Security Administration, Department of Labor or other Federal agency.

Between these two extremes is the probable course—the recommendation of Federal guidelines which all states should meet after a reasonable period of perhaps three to four years, allowing time for state legislatures, or perhaps a recommendation for actual Federal standards, to be met by the states in certain areas and administered by them.

A third possible recommendation in the middle ground would be for Congress to enact a law requiring all states to meet 2/3 of the average wage in a state as a minimum payment. This would strengthen the state hand and keep the Federal Government relatively clear of the program.

Most members of the Commission have been uneasy about the amount of litigation involving workmen's compensation cases and some have been grumbling about the high fees charged by lawyers.

Meanwhile, a study of changes in workmen's compensation laws by the states in 1971 showed that legislatures passed more than 300 amendments designed to provide better protection for disabled workers, faced with the possibility of Federal intervention.

A roundup of the changes is included in an article published in the Labor Department's Monthly Labor Review (Jan.) by Florence C. Johnson, Labor Standards Adviser in the Division of Workmen's Compensation Standards, Employment Standards Administration.

In the area of coverage, two states changed from an elective to a compulsory law, several states eliminated or lessened their numerical exemptions, and the coverage of farm workers was extended in at least seven states. The trend toward a "flexible maximum" weekly benefit continued as four more states provided for annual adjustments of benefits based on changes in the state's average weekly wage or on the "cost of living" index, rather than specifying a monetary amount by statute, the article states.

RUBBER WORKERS UNION SIGN HEALTH ACCORDS WITH 5 COMPANIES:

The Rubber Workers Union has signed agreements for on-the-job health studies with five companies and the sixth, Firestone, is expected to sign shortly. This will complete the industry agreements negotiated in 1970 for such studies.

The latest to sign was General Tire & Rubber Co. Previous signatories were B.F. Goodrich Co., Goodyear Tire & Rubber Co., Uniroyal, Inc., and Armstrong Rubber Co.

The University of North Carolina School of Public Health will oversee the Goodyear, Uniroyal and General Tire projects, as well as the Firestone agreement when it is signed. Harvard School of Public Health will be in charge of the Goodrich and Armstrong projects.

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A wide variety of groups, including those already in the field and those anticipating new programs, will be eligible for Federal educational and training grants to develop occupational health and safety professionals.

The National Environmental Health Association had written to Dr. Marcus Key, Director of the National Institute of Occupational Safety and Health, to say that under NEHA sponsorship such educational programs already exist "and are growing in number almost daily, although they have not been fortunate to receive Federal assistance in any appreciable amount."

Dr. Key replied through Dr. Alan D. Stevens, Assistant Director for Extramural Activities, that the objectives of the two programs were perfectly compatible.

"Ongoing environmental health education programs such as those which have been engendered by your organization's efforts are in an excellent position to request grants for complementation by adding specific sub-programs with major emphasis in occupational safety and health courses.

"We do not feel, however, that eligibility to apply for such support should be or can be limited to only institutions with existing programs in environmental health. Many institutions with capabilities for training in the engineering and biological sciences, yet which do not have a strongly defined program in environmental health, have strong interest and ability to conduct the training required by the Occupational Safety and Health Act.

"We are aware of the fine work your organization has done and appreciate the fact that it is consonant in many areas with our own interests and responsibilities. . . We believe those institutions with existing environmental health programs can be excellent places to provide supplementary support and we would encourage this interest in making application for our grants."

FLU SHOTS—HOW VALUABLE ARE THEY?

An old question among industrial physicians is whether or not to administer influenza vaccines before an anticipated epidemic. Now that such epidemics are more predictable in various cycles, the question assumes more importance. Some say they help, others say they don't.

A generally negative viewpoint was expressed by Dr. Aaron Chaves, head of New York City's Health Department's control services for chronic and communicable diseases. He recommends them for patients with heart conditions, or elderly and other high-risk groups.

If vaccines are administered to the general working population, they must be given well in advance of any influenza outbreak to have any protective effect at all, says Dr. Chaves. And even then he made it clear he wasn't entirely convinced of the vaccine's effectiveness.

For individuals who have received vaccine in a previous year, at least two to three weeks are required after re-vaccination before their effectiveness can be expected, he believes.

RULEMAKING ON CRANE AND DERRICK STANDARDS EXTENDED:

Proposed rulemaking proceedings on standards for boom angle indicators, load indicators, weight-moment indicators and overload protection devices on cranes and derricks have been extended to May 1.

Extension of the proceedings was recommended by the Labor Department's Advisory Committee on Construction Safety and Health. Written comments on the proposed standards may be mailed to the Office of Safety and Health Standards, Occupational Safety & Health Administration, Room 305, 400 1st St., N.W., Washington, D.C. 20210.

CONTRACT AWARDED FOR COAL MINING RESEARCH MACHINE:

A \$643,114 contract has been awarded by the Interior Department's Bureau of Mines to develop a full-scale research model of a continuous coal mining machine, especially equipped for dust experiment and other research.

The contractor, Ingersoll-Rand Research, Inc., Princeton, N.J., has 18 months to design the machine, build it and test it extensively in an underground coal mine.

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The machine will be used primarily to see if respirable dust concentrations can be reduced by reshaping the cutting assembly on continuous miners, or by changing the way the machines are operated. Continuous mining machines are the most abundant sources of dust in mines which use them.

To reduce the incidence of pneumoconiosis, Federal regulations place limits on the respirable dust concentrations allowed in mine air. New technology could make it possible for dust limits to be set even lower, the Bureau of Mines said.

Instruments on the experimental continuous miner will make it possible to monitor such factors as the machine's power consumption, flow rate at each nozzle from which water is sprayed to combat dust, noise levels and respirable dust production.

Previous attempts at such research developed severe technical difficulties when relatively delicate laboratory instruments were used on standard-model machinery during production operations in a commercial coal mine, the Bureau said.

SEN. RANDOLPH TO AMEND BLACK LUNG BILL:

Sen. Jennings Randolph (D-W.Va.) says he will introduce amendments to his bill (S. 2675) to liberalize benefits for miners suffering from pneumoconiosis, and their dependents.

The amendments would relax evidence requirements for widows, establish a presumption that a miner's disability arose from employment in the mines, make benefits retroactive to Dec. 30, 1969, make surface miners eligible, authorize more specialized medical services in mining areas, authorize simpler tests to detect pulmonary and respiratory ailments, allow free disability tests and the transfer of benefits to dependents where desirable.

Meanwhile, an Administration spokesman opposed extension of the benefit program at a Congressional hearing on the legislation. Stephen Kurzman, Assistant Secretary of H.W. for Legislation said:

"Basically, coal workers pneumoconiosis is an occupational hazard, the cost of which should be borne by the coal mine industry, just as in other industries the health hazards of employment are compensated under state workmen's compensation or occupational disease laws, which are generally financed by industries."

The 1969 law would take care of the accumulated claims for three years and give states a chance to amend their workmen's comp laws, Kurzman said, adding that extension of the law would be "an ill-advised step toward federalization under workmen's compensation."

PENNSYLVANIA UNION OFFICIALS CONFER ON OCCUPATIONAL PROGRAMS:

Officials of the Pennsylvania Department of Environmental Resources met informally recently with labor union representatives to outline the aims and objectives of the state occupational health and safety programs.

Wesley E. Gilbertson, Deputy Director for Environmental Protection and Regulation, extended an open invitation to the union representatives and all other employees to contact state personnel when they suspect a particular plant operation may be endangering the employee's health.

Edward Baier, Director of the Bureau of Mine and Occupational Health and Safety, but now Deputy Director of H.W.'s National Institute of Occupational Safety and Health, traced the department's efforts in the field of occupational health.

Standards are gradually being upgraded as more information is received, Baier said. But he emphasized that union input is necessary in establishing new health and safety standards.

"The workman should be made aware of what he is being exposed to at his place of employment and for this reason it is the responsibility of the industrial hygienist to inspect all places of employment, including manufacturing plants, quarries and all other sites where a potential job health hazard exists," Baier said.

Pennsylvania has about 400,000 known places of employment, but only 38 industrial hygienists employed by the state. It should have its own occupational health and safety law by the end of 1972.

Drafts are being prepared of legislation, one on occupational health and the other on occupational safety, which are expected to be combined and then presented to Gov. Milton Shapp for introduction into the Legislature.

REGULATIONS PROPOSED FOR LEAD POISONING PREVENTION GRANTS:

Proposed regulations governing grant awards under Titles I and II of the Lead-Based Paint Poisoning Prevention Act of 1991 have been published by the Department of H.W. The Act is administered through the Bureau of Community Environmental Management.

The Act, P.L. 91-695, authorized the Secretary of H.W. to award grants to specified units of local government for two purposes: development and operation of programs for detection and treatment of childhood lead-based paint poisoning cases (Title I); and identification and elimination of sources of poisoning (Title II).

The proposed regulations require that grant-funded projects for detection and treatment include: educational programs on the health hazard and prevalence of the problem; programs of intensive testing to detect cases and insure prompt medical treatment; and follow-up programs to insure that identified cases are protected against further exposure.

Grants made for elimination of lead-based paint poisoning sources are to be made for the purposes of identifying high-risk areas by testing for the presence of lead-based paints on residential housing, and eliminating the dangerous paints from all surfaces of such housing to which children may be exposed.

On both Titles I and II of the Act, the proposed regulations specify that local, grant-funded programs will afford employment opportunities, with appropriate training and education, for residents of the communities or neighborhoods affected by the problem.

NEW DISCLOSURE REGULATION PROPOSED FOR PRIVATE PENSION PLANS:

A new regulation which would provide more meaningful information to employees covered under private pension plans has been proposed by the Labor Department, implementing the Welfare and Pension Plans Disclosure Act. The proposed regulation would:

- * Require plan administrators upon request to furnish plan participants a comprehensive description of what the pension plan provides in simple non-technical language clearly setting forth the circumstances under which they might lose benefits.

- * Require plan administrators to provide written notification to those covered of their right to examine and receive copies of their plan descriptions.

The proposed regulation is the result of study and analysis under way for more than a year within the Department, including consideration of more meaningful disclosure methods in recent meetings of the Advisory Council on Employee Welfare and Benefit Plans, said Assistant Secretary of Labor W.F. Usery, Jr.

Comments on the proposed regulation should be made by March 2 to the Assistant Secretary of Labor for Labor-Management Relations, U.S. Department of Labor, Washington, D.C. 20210.

RESEARCH PROJECT SEEKS TO MODIFY HEART DISEASE RISK FACTORS:

Important to occupational health, a large-scale clinical trial to determine to what extent illness and death from coronary heart disease can be reduced through measures to modify or eliminate three common risk factors will be undertaken soon by the National Heart & Lung Institute.

The NHLI Clinical Applications Program is currently inviting contract proposals for development and conduct of a Multiple Risk Factor Controlled Clinical Trial to determine whether a preventive program directed at the reduction of elevated serum lipids, blood pressure and cigarette smoking among high-risk males aged 40-59 can achieve a significant reduction in the incidence of heart attacks and death from coronary heart disease over a six-year period of medical management.

The program should attract applications from industrial medical researchers, who have plenty of experience in this field. An NHLI spokesman told us they would be welcome but cautioned that all applications must be submitted by Feb. 28.

Contracts in financial support of the Clinical Trial will be awarded on the basis of national competition to medical investigators judged best qualified to establish necessary cooperative arrangements; to undertake the screening, evaluation and enrollment of participants; and to maintain medical-management regimens for the six-year follow-up period.

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Adequate clinical facilities must be available at each potential participating center to recruit at least 600 men at high risk because of high blood lipids, elevated blood pressure or cigarette smoking, and to manage at least 300 high-risk men in the study group. Each study participant must be seen at least four to six times per year (more initially) and each member of the control group once per year.

Contract recipients will use a common protocol with standardization of measurements and clinical procedures. These will be developed by the principal investigators of each clinic in conjunction with the NHLI program office staff and with a Steering Committee and Policy Board.

Men recruited by each center will receive medical and laboratory evaluation at the start of the program and periodically over a planned six years of follow-up. A special program relating to diet, blood pressure reduction and reduction or discontinuance of cigarette smoking will be undertaken for one-half of the participants while the remainder would be referred back to their personal physicians or usual medical care centers.

Approximately 80% of death and disability from cardiovascular diseases occurs among persons having one or more of these risk factors, according to current estimates. Two or more risk factors are commonly present in the same individual, and persons with all three risk factors are at especially high risk from arteriosclerosis and its complications, including heart attacks.

Data gathered from the NHLI-sponsored Framingham Heart Disease Study shows that men with one risk factor had a clinical incidence of coronary heart disease of 1.9 times the rate of men with none of these risk factors. With two risk factors present, the incidence was 3.4 times higher, and with all three factors the incidence was 10.6 times that found among men with none.

NIOSH TO CONDUCT TRAINING COURSE IN LABORATORY SAFETY:

The National Institute of Occupational Safety and Health will conduct a training course in safety in the laboratory May 8-12 at its headquarters, 1014 Broadway, Cincinnati.

The course is intended to train safety managers, lab staff members and related workers in accidental injury control. The course provides an opportunity for existing staff members to be reappraised of the facilities and methods at their disposal to minimize the occurrence of injury in the lab.

Administrative, human factors and organizational aspects, as well as design and construction of lab equipment and facilities, will be discussed. This includes discussion of plumbing, electrical and other appropriate standards. Methods of handling reagents, biological, pathological, radioactive materials and various specimens will be reviewed.

Animal care and related facilities, protection from extreme temperatures and waste storage and disposal are included. In addition, the trainee will have opportunity to investigate ventilation systems, clean rooms, diseases transmissible to man, emergency aid, noise and other pertinent subject matter.

For details, contact Director, Training Division, NIOSH, 1014 Broadway, Cincinnati, Ohio 45202.

Note: The 32nd Annual American Medical Association Congress on Occupational Health will be held at Chicago's Drake Hotel Sept. 11-12. For details, contact AMA, 535 N. Dearborn St., Chicago, Ill. 60610.

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NASA REQUESTS PROPOSALS FOR SPACE HEALTH CARE SYSTEM:

NASA has invited eight aerospace firms for proposals to design, develop and test a ground-based test unit of the Integrated Medical and Behavioral Laboratory Measurement System, a sophisticated lab system that provides an on-board capability for obtaining basic medical and behavioral data in the zero gravity in space environment and for providing clinical support of the astronaut crew.

Although NASA has experience in providing health care for crewmen on the ground as well as in space, full definition and design of a system which satisfies the requirements of a health services system for long-duration mission is still needed, it said. A long mission will require some member of the crew to be especially trained, such as a physician's assistant, hospital corpsman or nurse and must be able to consult with the ground and obtain special assistance to assure comprehensive, quality care.

Firms invited to submit proposals include: General Dynamics, General Electric, Grumman, Honeywell, IBM, Lockheed, McDonnell Douglas and Spacecraft, Inc. HEW and VA officials will participate in evaluating the proposals.