FILE NAME: Rogers Corporation (ROG)

DATE: 1978

DOC#: ROG067

DOCUMENT DESCRIPTION: Trade Journal Articles - Warning Labels Likely if Cancer is Suspect & Changing Rules Keep Buyers Scrambling

REGULATIONS

Warning labels likely if cancer is suspect

WASHINGTON—Warning labels on chemicals believed to cause cancer—and on products containing these chemicals—could be standard procedure by the end of the year. In addition, companies which use, buy, handle, store, or distribute toxic chemicals will be required to post warning signs in appropriate locations.

That's just one provision of OSHA's proposal for the regulation of carcinogenic chemicals.

The proposal—entitled "Identification, Classification and Regulation of Toxic Substances Posing a Potential Occupational Carcinogenic Risk" (*Federal Register*, Vol. 42, No. 192)—goes into public hearings in May. Barring any significant hang-ups, the proposal is expected to become law by late 1978 or early 1979.

Three classes. OSHA aims to class all chemicals into one of three categories according to carcinogenic potency. For chemicals in Category I (most potent), signs in the workplace flatly will state "Cancer Hazard."

For chemicals in Category II (less potent), the signs will read the same, except that "Cancer Hazard" will be changed to "Potential Cancer Hazard."

No signs or labels will be required for the third category, comprising chemicals for which the government does not believe enough evidence has been gathered to determine whether they cause cancer or not.

Containers of chemicals in the first two categories also will require warning labels. So will containers of products which use the chemicals in virtually any amount.

Labeling required. The upshot is that suppliers of chemicals in categories one and two will be required to attach labels on all out-going containers, and the user company will have to affix labels on any finished product which contains that raw material, or which used it as an intermediate during manufacture.



Workplaces where cancer-causing chemicals are used would require posting of "Cancer Hazard" signs

Labels will also be required for containers of protective clothing contaminated with the chemical. According to the proposal:

"No evidence may presently exist that laundry workers who handle contaminated clothing containing any specific carcinogen exhibit an excess of cancer. However, no evidence exists to the contrary."

So far, no specifications (size, color, etc.) have been set for either the warning signs or the container labels. —*Henry G. DeYoung*

COATINGS

High solids gain in coatings

CHICAGO—Newly-developed high solids coatings should grab increasing shares of the coatings marketplace over the next few years.

While high solids are somewhat more expensive than conventional coatings by an average of 10%, developers claim they're cheaper in the long run, by cutting waste, cutting application time, and by going a long way towards meeting stringent emission control standards.

Several types of high solids coatings (e.g., polyesters and urethanes) have been in use for more than a year in various end-markets, says Richard G. Forsythe, vice-president and general manager of Sherwin-Williams' Chemical Coatings Division. The company (as well as several others in the industry) are now working to bring new and improved variations on stream.

Less solvent waste. As the name implies, the coatings are characterized by a high percent of volume solids—typically 60-80% versus 25-40% for conventional paints. That means that with each pass of a spray gun, more solid film-forming material is deposited, and less solvent goes up the stack.

Not only does that save on hydrocarbon solvents, says Forsythe, but it's also in closer compliance with EPA standards, which can be expected to get tougher as time goes on.

The new coatings, moreover, are designed for use with all types of existing equipment: roller coating, electrostatic spray, airless spray, and compressed air spray.

"In the past," notes Forsythe, "there were a lot of problems. For one thing, it was so thick you could walk on it. Now we have high solids material which flows and applies very easily."

Some resistance. Still, high solids coatings aren't quite ready for full commercialization. Alex Ramig, manager of chemical coatings R&D at Cleveland's Glidden Corp., says that he isn't aware of any 80%-solids material now in commercial use:

"We've found that people don't want to make the switch unless it's absolutely necessary; there has to be a clear advantage. And while it's true that you apply more solids with each coat, you're also losing more solids in over-spray."

As a consequence, he adds, many users are adding solvents during application, and hence aren't sure what percent the solids actually are. Others find it necessary to heat the paint to promote flow.

"We're going to see a lot more work on this," says Ramig, "especially as EPA toughens its regulations on solvent emissions. At present, it's very much in the experimental stage."

PROTECTED

RGS-SC 052694

SAFETY EQUIPMENT

Changing rules keep buyers scrambling

By El Hoeffer / Metalworking Editor

Purchasing turns to user departments and suppliers to pinpoint workplace hazards and applicable standards for safety products

CHICAGO—When the National Institute for Occupational Safety & Health (NIOSH) conducted a series of tests on safety equipment said to comply with OSHA standards, it discovered a significant percent of safety goggles, footwear, and face protection failed to meet critical requirements.

Coupled with frequent user complaints, the tests convinced NIOSH that government-controlled product testing and certification is the only way to assure commercial availability of high-quality, protective equipment.

"Unless *all* producers manufacture products and control quality in complete conformance with published, unambiguous performance standards, NIOSH believes that federal certification is necessary and inevitable," declares Robert H. Schutz, director of the Institute's testing and certification.

The Industrial Safety Equipment Association (ISEA), Philadelphia, agrees, in principle. It would like to see NIOSH set standards, test products, and issue equipment certification, but have the manufacturers voluntarily control product quality.

Last fall, ISEA developed 15 quality assurance guidelines and asked NIOSH to incorporate them in its certification procedures. ISEA president M. G. Hulme, vice-president of Mine Safety Appliances, Pittsburgh, reports favorable response from NIOSH, though no concrete action on the proposal.

Not everyone agrees with the need for federal certification of equipment. Labor and business are apprehensive of the government acquiring more regulatory control. OSHA specifies American National Standards Institute (ANSI) standards which are consensus guidelines. ANSI defends these as representing the expertise of all affected parties. In contrast, it asserts, government-set standards can be quite arbitrary.

Buyers need input. In the absence of clear-cut regulatory authority and permanent standards, buyers face a critical challenge: knowing exactly what the in-plant hazards are, which laws apply, what alternative equipment is available, and how to

Sizing up ANSI standards

The following standards of the American National Standards Institute should be considered by any buyer of personal protective equipment:

A10.14	Requirements for safety belts, harnesses, life lines and drop lines
Z86.1	Commodity specifications for air (CGA G7.1)
Z87.1	Practices for occupational, educational, eye and face protection
Z88.1	Safety guide for respiratory protection against radon daughters
Z88.2	American National Standard for respiratory protection
Z88.4	Safety guide for respiratory protection against coal mine dust
Z88.5	Practices for respiratory protection for the fire service
Z89.1	Requirements for industrial head protection
Z89.2	Requirements for industrial protective helmets for electrical workers, Class B

PROTECTED

RGS-SC 052695

procure it economically. As many have discovered the hard way, anything generally called safety equipment is not necessarily a legal safeguard. But beyond that, the equipment may involve a standard that is being reviewed or revised—a point that can leave buyers wondering whether they should purchase the most durable product or one that will suffice until the new standard is enacted.

The answer to purchasing's dilemma must come from in-plant personnel and safety equipment suppliers. Using departments must identify hazards, standards, and needs; while suppliers pinpoint applicable regulations, equipment alternatives, and training necessary for proper use.

The supplier, whether manufacturer or distributor, is critical. Some intimate that their product covers a variety of safety applications, where—in fact—regulations specify particular types of construction or material. The supplier must have a wide product line so specific needs can be satisfied. His ability to provide technical backup and regulatory data is also key.

Responsible suppliers are developing expertise more rapidly than new products. Dramatic breakthroughs in new equipment are the exception, while growing knowledge of products and applications is the rule.

OSHA states that when a workplace hazard cannot be eliminated through engineering or administrative changes, use of personal protective equipment is mandatory. The National Safety Council advises buyers to use two selection criteria: degree of protection the product affords, and ease with which it can be used.

Two selection criteria: degree of protection product affords and ease with which it can be used.

OSHA section 1910.132 sets general requirements for application, provision, and design of personal protective equipment (PPE); section 1910.140 cites ANSI standards as the reference requirements. The following is a product-by-product review of current developments.

Personal protection equipment: how big a market?

	Sales ($ million)		
	1963	1976	1990
Eye protection	$81	$214	$486
Face protection	46	95	160
Head protection	23	79	215
Safety clothing	22	72	219
Respiratory devices	34	65	135
Protection	26	39	140
Miscellaneous devices	16	73	189
Total	$242	$832	$1515

Glasses and goggles: style becomes big factor

The law requires that protective eye and face equipment be provided where there is a "reasonable probability of injury that can be prevented by such equipment." Minimum requirements state the product must protect against the hazards for which it is designed; be reasonably comfortable, fit snugly, and allow the worker free movement; be durable and easy to clean.

In buying safety glasses, check to be sure the identity of the manufacturer is on both lens and frames. On plano, tinted, and welder spectacles, identification is near the upper center of the lens; on prescription, by the upper temple corner.

Lenses must be hardened, either by heat or chemical treatment. They must also be distortion-free, 3.0 to 3.8 mm thick. Protective prescription lenses can be 2.5 mm thick at the edge.

After assuring that glasses or goggles meet or exceed ANSI standards, the buyer's most important consideration is employee acceptance. Style has become as important as comfort; thus, manufacturers now offer a much wider range of shapes and designs.

Plastic lenses (polycarbonate) offer advantages over glass: they're lighter, more comfortable, less fatiguing, and allow for more stylish frames. They are also unbreakable, more impact-resistant, and usually cost less. Prescription safety lenses, however, must be made of shatter-resistant glass. Glass also is much more scratch-resistant, an important consideration because OSHA states spectacles having more than minor scratches must be replaced.

Goggles must be designed for specific hazards—for example, chemical splashes and fumes, noncorrosive dust, fogging, metal chips, and even laser beams. They differ from face shields, which

PROTECTED

RGS-SC 052696

Safety equipment
(continued)

usually are attached to some form of head gear yet must satisfy all eye protection requirements. Common shields for which there are now strict standards include babbitting and welding helmets, hand-held face units, and acid-proof and air-supply hoods.

Earplugs and muffs: sound out a hygienist

When a worker is exposed to noise levels exceeding permissible OSHA levels, the employer must provide personal ear protection. The two basic types:

- Earplugs which can reduce noise 25-30 dB (usually ample protection against sound levels of 115-120 dB);
- Earmuffs which can reduce noise 35-45 dB (generally effective at sound levels of 130-135 dB).

A combination of these can add 3-5 dB more protection.

Reliable manufacturers have developed their own attenuation charts indicating degree to which their product will reduce noise. The buyer should order ear devices with references to his supplier's claims in writing.

Insertable ear protection may be disposable or permanent type. Untreated cotton has poor noise dampening property, and its usage would provide a poor defense against a lawsuit. Wax- or plastic-impregnated cotton is effective for short-term use. Pliable (rubber or plastic) permanent insertable plugs, molded to fit the individual's ear are good, comfortable attenuators. They must be fitted by a trained person and normally become user property.

Major and special noise hazards usually require muff devices. If an electrical hazard is present, nonconductive material is a must.

In selecting plugs or muffs, the buyer should be guided by the advice of a safety engineer or industrial hygienist.



Earplugs are inexpensive noise protection devices, but may have a short service life. Three types: formable, custom-molded or prefabricated.

Respirators and masks: disposables emerge

Respiratory equipment is the most confusing area in personal protection because of overlapping regulatory authority. The Bureau of Mines (MESA), OSHA/ANSI, and NIOSH all have authority to set standards—and have for varying conditions. ANSI standards generally cover safety programs, while latest product standards come under NIOSH/MESA certifications.

During the past five years, manufacturers have developed disposable face masks offering several benefits over the reusable type. The disposables are lighter and less expensive, eliminate cleaning and maintenance costs, and have high worker acceptance. However, reusables offer a much wider range of applications and are built sturdier to hold their seal for longer work periods.

Because respirators and masks are worn primarily in hazardous workplaces, selection is critical. With heavy testing currently being conducted by NIOSH, look for new, tighter regulations governing toxic substances and suspected carcinogens.



Disposable respirators are gaining popularity. This vinyl-chloride protector provides a visible "end-of-life" indicator.

Footwear: revisions on the march

Guidelines for selecting safety footwear are murky. General requirements are covered by ANSI Z41.1, which is being revised. Final approval and promulgation of a revision probably won't come until next year.

Meanwhile, NIOSH has declared its tests of safety-toe footwear show most products do not meet critical ANSI requirements. The footwear industry replies that its products have a proven safety record under actual workplace conditions.

ANSI recently issued standards covering special conditions: metatarsal protection (Z41.2); conductive soles, to discharge static electricity buildup (Z41.3); and electrical hazards (Z41.4). Buyers should identify the hazard and buy with reference to the standard.

Buyers have become more concerned about the skid resistance of protective footwear. One manufacturer notes that more workers are injured and more compensation paid for back injuries and broken bones resulting from falls than any other workplace incident. National Safety Council statistics support that observation.

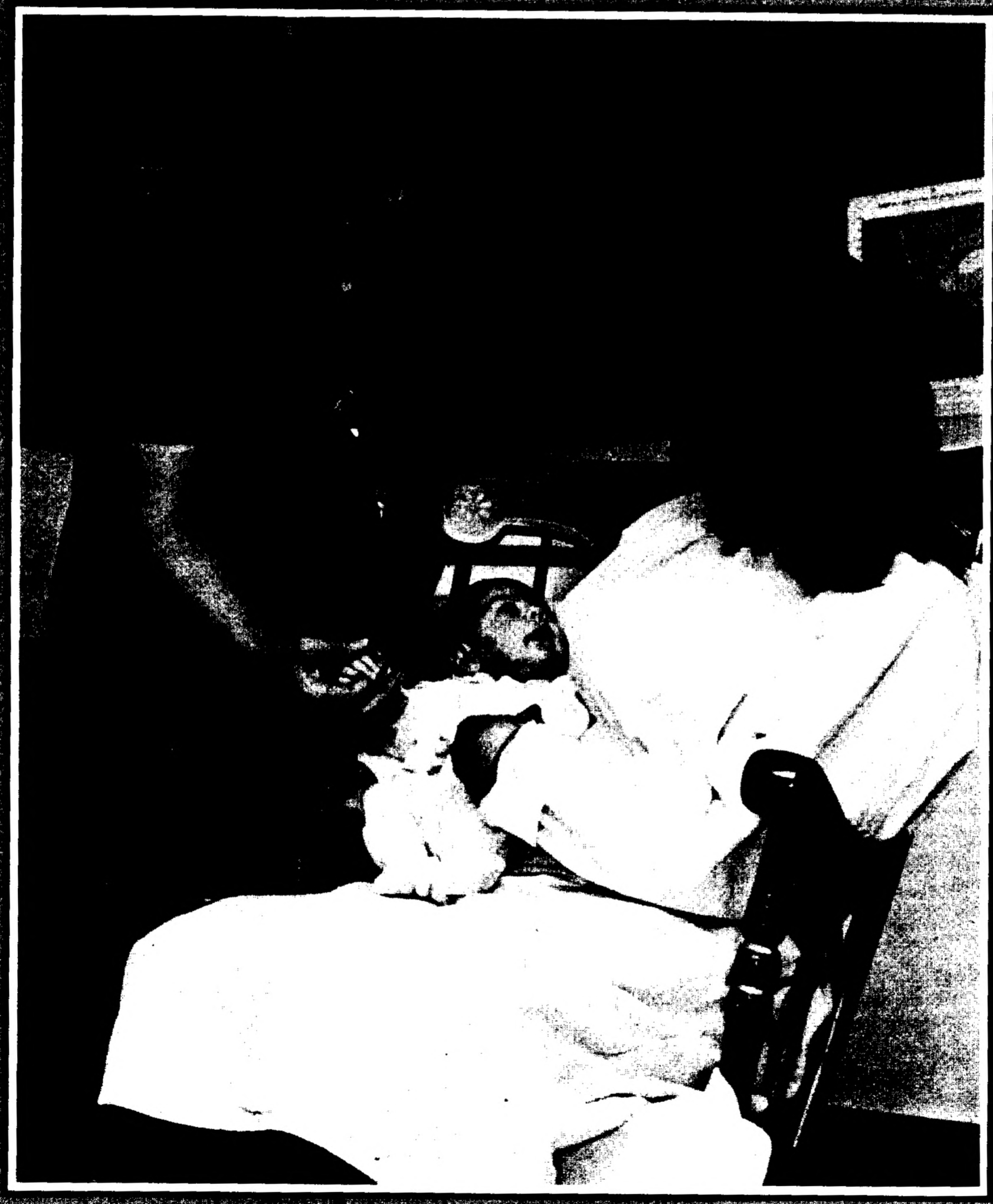
Recently, many manufacturers have shifted to heavier gauge steel toe caps (from .054 to .062 gauge), to provide better toe protection and, hopefully, to slow rising foot-injury lawsuits. But, NSC warns, safety-toe shoes are just that—toe protectors that do not provide total foot protection. They should not be bought as all-purpose foot protection.

Worker acceptance has increased lately as manufacturers have designed lighter, more comfortable products. Contributing to acceptance is the general practice of employers, who buy the foot-

PROTECTED

RGS-SC 052697

SPRINGFIELD
SPECIAL BULLETIN
NEWSLETTER



Contents

Vol. 3 No. 1 **Winter 1979**

From the Commissioner 3

Articles

Further Reflections On Infant Mortality
In Connecticut ..... Estelle Siker, M.D., M.P.H. and Hugh Fritch, B.S. 4

New Developments In The Health Services
For Handicapped Children ..... Saro Palmeri, M.D., M.P.H. 7

Provision Of Local Director Of
Health Services ..... Michael A. Rossetti, M.Ed., R.S. 10

State Government Reorganization Guide —
Connecticut's First Health Services Commissioner 13

Features

People and Programs
WIC Outreach 15
In Memoriam—Dr. James McElroy and Miss Hazel Dudley, R.N. 17
Smoky Issue Cleared 18
An Act Prohibiting Smoking In Certain Places 18
First State Level Comprehensive Health Plan 19
Joel Mulder Heads Pulmonary Disease Section 19
Annual San Francisco Cancer Symposium 19
Formaldehyde In Home Insulation Material 20
Asbestos Monitoring Continues In Connecticut 20
Legionnaires Disease 21
MCH Sponsors Intensive Care Project 21
Genetic Services 21
Dr. Bapat New Chief Of Maternal and Child Health Section 21
Premarital Rubella Law 22
Rabies In Pet Skunks 22
Health Education Conference 22, 23
Cold Weather Blues 23
Heart Association Penicillin Payment 23
Index Of Available Sanitation Guidelines 24

Emergency Medical Services
Chris Gentile New EMS Director 25
EMS Center Stage At Big "E" 25

State Laboratory
Laboratory and Blood Bank Regulations 26
Specified Water Sampling Containers 26
Laboratory Notes 26

Staff 27

Issued quarterly by the Connecticut State Department
of Health Services, 79 Elm St., Hartford, Connecticut 06115,
second class postage paid at Hartford, Connecticut.

FORMALDEHYDE IN HOME INSULATION MATERIAL

The environmental chemistry laboratory is analyzing insulation material for formaldehyde. It is currently popular to apply foam insulation to existing homes where the cost of removing siding is too great to allow conventional vapor barriers, vapor-proofing and batt insulation. The one with least flammability is urea-formaldehyde insulation, and it has lately become very popular. In some cases, however, the residents have experienced difficulty due to irritating fumes. These fumes seem to be mostly formaldehyde vapor, and they seem to dissipate very poorly in a distressing number of cases. Studies have been initiated by the Departments of Health Services and of Environmental Protection to deal with this problem.

Health Effects Associated With Urea-formaldehyde Foam Insulation

The energy crisis which has befallen us over the last two years has created a boom in the home insulation business. Several new insulating materials have been introduced as a result of these mass attempts to conserve fuel. One of these new products is urea-formaldehyde foam insulation. Due to its excellent insulating capacity, the use of this foam has



become increasingly widespread. Unfortunately, the rise in popularity has been accompanied by a rash of complaints to the Health Services Department, concerning the emission of formaldehyde gas from the foam insulation. It has not yet been determined whether it is improper manufacturing, curing, or installation which has caused formaldehyde to be emitted. Men, women, and children of all ages have experienced health effects from formaldehyde which has entered the air inside their homes. Reported symptoms include eye and nose irritation, sore throats, and coughing. A number of people have also become sensitized to the formaldehyde and have thus become "allergic" to their own homes. As of this writing, the Health Services Department has investigated 85 such complaints. Tests to determine formaldehyde air levels have been performed in each home, and symptomatology has been recorded through use of a questionnaire.

Connecticut's Task Force on Insulation has recently submitted recommendations concerning the regulation of urea-formaldehyde insulation industry to the Governor. These include the testing and licensing of all manufacturers and installers associated with this product. In an effort to assess the long-term health effects of low doses of formaldehyde, the Health Services Department is attempting to obtain federal funding for a more thorough epidemiologic study.

ASBESTOS MONITORING CONTINUES IN CONNECTICUT

Increasing concern about hazardous substances in the environment has led to the expansion of testing for asbestos from schools, homes and industry. This substance, so valuable because of its resistance to heat and chemical attack, has been used for many kinds of insulation — electrical wiring, boilers and steam pipes, gaskets, flame-resistant clothing for firefighters, and fireproofing for structural steel all depend on these qualities of asbestos. For similar reasons, it is used for brake linings, in plaster or mortar, and in roofing materials.

The environmental chemistry laboratory continues to receive samples from local health departments, concerned citizens, school systems, and other state agencies for asbestos identification.

Method of Distinguishing Asbestos Types

The types of asbestos can be distinguished by a microscopic technique called "dispersion staining." The material is immersed in a liquid whose refractive index is the same as or close to one of the indexes of the suspected compound. It is illuminated by a narrow beam of polarized light, which is then blocked by an opaque stop after passing through the objective. Only that light that was refracted by the prism effect of the particle, and thus passes around the stop, is able to reach the eyepiece. If the indexes match, the yellow light is stopped, the red light bends to one side and blue light to the other, and they recombine at the eyepiece to give magenta. When the match is not exact but is close, the color seen will be different, and it tells whether to go higher or lower. The chrysotile fibers in the specimen would show colors from magenta to blue depending on orientation, and some might be pale blue or even green, due to the third optic axis. Most glass fibers, rock wool and mineral wool would show blue color, but it would not vary as the slide is turned and it would not show extinction effects with crossed polarizers. Cellulose structures like cotton and wood have a much wider range of index, so they show color only in one direction. Synthetic fibers may show colors, but their dimensional uniformity easily distinguishes them from asbestos.