

TO: Keith Fogg-LCCP

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FROM: T. G. Grumbles

DATE: July 22, 1991

Interoffice
Communication

SUBJ: PRECAUTIONS FOR REMOVAL THERMAL MATERIALS IN ETHYLENE
HEATERS

VISTA

Based on a review of the information provided by the suppliers of these materials (A. P. Green and Thermal Ceramics) below are my comments and recommendations regarding safework practices for removing these materials from the furnaces.

HAZARDS

It is clear that two distinct respirable hazards are presented during this work. Exposure to the Cristobalite form of silica and to ceramic fibers are possible.

The current TLV and PEL cristobalite is 0.05 mg/n^3 for the respirable dust fraction.

There is currently no consensus standard developed for ceramic fibers but the manufacturers are recommending 2 fibers/cc.

Cristobalite is classed a "probable" human carcinogen and ceramic fibers are classed as "possible" human carcinogens.

Air Sampling

The sampling technique for respirable cristobalite is done with a standard cyclone/filter sampling train.

The ceramic fibers are sampled similar to asbestos.

Air sampling for both materials should be conducted in a manner similar to what is required for small-scale short-duration asbestos jobs. A typical exposure level for the job should be determined via personal and area sampling during two or three removal jobs. All personnel involved in the work area, including welders, should be evaluated.

Respiratory Protection

The manufacturers of these substances recommend half-mask air-purifying respirators with a high-efficiency filter.

The high-efficiency filter will protect the wearer from both hazards. The specific type of respirator worn should be consistent with the plant's general policies on respirator use.

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Other Protective Clothing

The manufacturers recommend loose-fitting clothing that covers the arms and legs, and is made out of a material that will not retain dust or fibers. Specific laundering recommendations are also made.

I would recommend that disposable coveralls be used to meet the intent of the manufacturers recommendation and avoid the issues involved with laundering clothing.

Protective gloves and goggles should also be worn to prevent the potential for physical irritation.

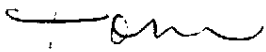
Administrative Controls

Wet removal methods are recommended by the manufacturers and should be utilized where feasible. Vacuuming only should be used for clean-up operations. The vacuums should be equipped with a "HEPA" filter.

Other issues such as sign-posting the work areas and worker training/notifications should be consistent with other non-routine exposures to hazardous materials.

Air sampling done to date by Vista was only for the respirable crystalline silica. Recent sampling done by a contractor was for ceramic fibers. Sampling results from both do indicate the potential for exposures but are not conclusive regarding the actual 8-hour time-weighted exposures. Typically these jobs do not last for a "full-shift" and short-term sampling results would have to be extrapolated. There are no STEL's recommended for these substances.

Based on the hazards presented by these thermal materials, and the recommendations made by the supplier, it would seem prudent to utilize our established asbestos removal procedures to the extent feasible for worker protection and removal methods. .


T. G. Grumbles

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Ward's cousin, and Neely said that Ward's mother did not blame Buttram and did not want to see him incarcerated, and the state honored her wishes.

Also in connection with the accident, the Virginia Department of Labor and Industry issued citations to B&B alleging 11 violations of Va/OSH rules and proposing a total penalty of \$50,000. Included in the charges is the failure to use safety lines or belts to guard against employee falls of more than 25 feet. B&B has contested those citations and a bench trial is set for Aug. 20 in the Virginia General District Court.

Manmade Fibers

LABOR, INDUSTRY RECOMMEND EXPOSURE LIMITS IN ANTICIPATION OF OSHA PROPOSED RULE ON PELs

Regulation of workplace exposure to synthetic fibers has drawn increased attention in recent weeks from labor and industry groups, as the Occupational Safety and Health Administration prepares a proposed rule that would establish permissible exposure limits for three types of fibers.

Representatives of fiber manufacturers and unions representing construction workers have pressed OSHA with recommendations for appropriate exposure limits.

Moreover, OSHA already has made a determination that, based on current research, fibrous glass products must carry labels warning that exposure to the substance may cause cancer (see related article in this issue).

OSHA intends to establish permissible exposure limits for fibrous glass, mineral wool, and refractory ceramic fibers as part of its rulemaking to update hundreds of PELs in the air contaminants standard for the construction, maritime, and agricultural industries, according to agency officials.

New limits for the synthetic fibers also will apply to general industry, which was the subject of a previous air contaminants update in January 1989 (Reference File, 4103). Synthetic fibers were excluded from the general industry rule, according to OSHA, because health effects data available at the time were inconclusive.

As OSHA prepares a notice of proposed rulemaking that agency officials expect will be published in the fall, the following developments have occurred:

- TIMA Inc., a trade group representing producers of fibrous glass products, recommended to the agency in late June an exposure limit of 1 fiber per cubic centimeter of air for fibrous glass;

- In a position paper submitted to the agency in early July, the Building and Construction Trades Department, AFL-CIO, also recommended a 1 f/cc limit for fibrous glass, as well as for all synthetic fibers other than refractory ceramic fibers;

- BCTD suggested a limit of 0.1 f/cc for refractory ceramic fibers—the same as OSHA's proposed limit for asbestos—because of "strong evidence" that exposure to those fibers produces the same cancers as asbestos exposure.

Carcinogenicity At Issue

Officials from TIMA, the manufacturers' association, told BNA in a July 9 interview that the industry's recommended exposure limit for fibrous glass is based on "prudence" to protect workers from irritant effects of exposure to the products.

Frank Rauscher, executive director of the trade association, said fibrous glass presents no cancer hazard to humans. In particular, Rauscher and other industry officials cited a TIMA-funded epidemiologic study that has been following workers at 11 fibrous glass production plants and six mineral wool plants in the United States.

The most recent update of that study population showed that workers exposed to fibrous glass experienced a 12 percent excess of respiratory system cancers, according to TIMA. OSHA interpreted the U.S. study, and several other international studies, as showing "a statistically significant increase" in cancers and used the results of those studies to make its determination on the labeling issue.

Rauscher, however, said OSHA "misinterpreted our data" and "misread its own regulations" on cancer labeling. The TIMA official called the 12 percent cancer excess a very weak association by epidemiologic standards. He further suggested that confounding factors such as earlier asbestos exposure among workers or the presence of arsenic in the raw material from which fibrous glass is made may have contributed to the excess.

TIMA pressed these points in the meeting with OSHA officials in late June, he said. "We asked for clarification on what we presented and whether the data are positive or not positive," he said, adding that OSHA has not responded.

"We maintain, with great credibility, that there has never been a positive study" linking fibrous glass to cancer, Rauscher said. Furthermore, Rauscher said, animal studies have shown a tumor response only when fibers have been implanted into the animals, not in inhalation studies that simulate the route of exposure for humans.

Labor's View

AFL-CIO's building and construction trades unit reserved its strictest recommendation—0.1 f/cc—for refractory ceramic fibers, which are used for insulating at high temperatures.

The results from animal inhalation studies for refractory ceramic fibers provide "strong evidence that these fibers are carcinogenic, resulting in the production of lung tumors and mesothelioma not unlike that of asbestos," BCTD said in its 25-page position paper.

Concerning other synthetic fibers, the labor group said "epidemiological and animal studies are suggestive, but not conclusive that such fibers may possess the ability to cause cancer . . ." Therefore, the exposure limit should not be based on the understanding that those fibers pose the same hazard as asbestos, BCTD said.

Setting the exposure limit at the same level as asbestos, the group said, "could, unwittingly, allow all fibers to be treated the same and thus provide an arguable basis for reintroducing asbestos use into the workplace and environment . . ."

In addition to suggesting exposure limits for fibers, BCTD recommended that the agency adopt a limit for dust from synthetic fibers to protect workers from skin irritation. The group recommended a dust exposure limit of 5 milligrams per cubic meter of air.

Manmade Fibers

OSHA DECISION ON CANCER LABELING SPARKS CONTROVERSY OVER FIBERGLASS HAZARDS

A determination by the Occupational Safety and Health Administration that fiberglass products must carry cancer warning labels has sparked a controversy involving the agency, product manufacturers, and an ardent critic of the fiberglass industry who argues that the warnings should have been required years ago.

At issue is a May 6 letter OSHA sent to Richard Munson, the head of a California-based advocacy group called Victims of Fiberglass, outlining the agency's position on label-

ing. Also at issue is Munson's conduct since receiving the letter.

The controversy developed after OSHA Administrator Gerard F. Scannell issued a two-page letter in May in response to a request by Munson. In February, Munson had asked the agency to make a determination on what type of warnings are required for fiberglass products under OSHA's hazard communication standard.

The request was the most recent in a series of communications Munson has had over several years with OSHA and the Labor Department concerning the potential hazards of fiberglass. In previous responses, the government has indicated that scientific evidence was inconclusive concerning the carcinogenicity of the substance.

Scannell's response, however, asserted that a review of current literature by OSHA's directorate of health standards programs found several epidemiologic studies of fiberglass production workers "that showed a statistically significant increase in respiratory tract cancer."

The letter explained further that, given such a finding, "appropriate hazard warnings on fibrous glass products would have to indicate that fibrous glass may cause lung cancer in humans."

OSHA was not happy with Munson's response to the letter. H. Berrien Zettler, deputy director of compliance programs for OSHA, told BNA July 18 that Munson distorted the agency's position to the extent that OSHA is preparing an official clarification on the matter.

Furthermore, representatives of the fiberglass products industry disagree with OSHA's findings, arguing that the agency's own research shows there is no evidence that fiberglass causes cancer in humans. Industry representatives have asked the agency to reconsider its labeling decision.

Gross Exaggeration

Zettler told BNA that Munson took Scannell's letter "and made irresponsible and gross exaggerations with it."

According to Zettler, Munson has used the letter in his advocacy campaign to proclaim that OSHA has banned the use of fiberglass and was characterizing the substance as a carcinogen.

That, Zettler said, is not the case. The hazard communication standard is an information dissemination standard only and requires cancer warnings on product labels if there is positive evidence from human research, he explained. Zettler acknowledged there is some question whether current research supports claims that fiberglass causes cancer.

OSHA is not regulating fiberglass as a carcinogen, Zettler said, although the hazard communication standard does require warnings on the potential carcinogenicity of the substance. Zettler noted that the agency is studying the health effects of fiberglass as part of its massive updating of the air contaminants standard's permissible exposure limits for the construction, maritime, and agricultural sectors (see related article in this issue). A proposed rule is expected to be published in the fall.

According to Zettler, the agency is preparing a clarifying letter for Munson as well as a press release setting out OSHA's position. The letter "explains our chagrin at the way he has decided to handle this," Zettler said.

In an interview, Munson denied that he distorted OSHA's position, saying he never suggested the agency was banning the use of fiberglass. Munson accused OSHA of covering up the health hazards of fiberglass, noting that he has been asking the agency since 1987 to require cancer warnings based on positive human studies.

"They have been dragging their feet and a lot of people have been injured as a result," Munson said, characterizing fiberglass as "synthetic asbestos."

"You have to understand the frustration we've had dealing with OSHA on this issue," he added, noting that "the statistically significant lung cancers [cited by OSHA] were statistically significant in 1987."

Industry Position

OSHA's decision on labeling, meanwhile, has drawn the ire of TIMA Inc., the trade group that represents North American producers of fiberglass products.

Industry's concern over the issue stems from the potential damage their products may suffer in the marketplace as a result of being targeted as a carcinogen, according to Frank Rauscher, a former National Cancer Institute official who heads TIMA.

TIMA sponsored one of the studies cited by OSHA as having statistical significance—a study of workers at 17 production plants in the United States. The most recent update of the study cohort showed a 12 percent excess in respiratory tract cancers, a finding industry officials describe as a weak association that could be attributable to other confounding factors.

Concerning Munson's campaign, David Pullen, a Manville Corp. official who serves as TIMA's liaison for government affairs, said the anti-fiberglass advocate founded a company that markets a competing insulation product made from cellulose. TIMA regards Munson's advocacy campaign as a "competitor's attack on a product that is not scientifically based," Pullen said.

On the other hand, Munson charged that fiberglass product manufacturers themselves have an interest in using research to support their claims of having a safe product. Munson said he has dissociated himself from the cellulose insulation firm.

Practical Effects

In practical terms, the OSHA ruling should have little effect on product labels. Manufacturers were prepared to use more explicit warnings anyway because of strict requirements of Proposition 65, California's 1986 labeling law, according to industry officials.

TIMA officials said manufacturers were not required to warn of possible human hazards under the California statute but did so to take advantage of a "safe harbor" clause in the law that exempts manufacturers from failure-to-warn liability if their products carry the tougher labels.

Meanwhile, two manufacturers, Manville and Owens-Corning Fiberglas Corp., submitted their new labels drafted as a result of the California law to OSHA for review. In a June 28 letter to the firms, OSHA indicated that the labels—which warn of a "possible cancer hazard through inhalation"—provide an appropriate warning for workers.

Ergonomics

REVISED USER'S GUIDE TO MANUAL LIFTING WITH APPLICATION EXAMPLES EXPECTED BY FALL

A revised edition of the National Institute for Occupational Safety and Health's Guide to Manual Lifting, with examples of how to apply a new lifting equation, is "fairly complete" and expected for to be published in the fall, NIOSH Chief of Psychophysiology and Biomechanics Vern Putz-Anderson told BNA July 22.