

# OSHA Reviewing Cotton Dust Standards

*The agency may be relying on flawed studies to justify weakening the rules, critics argue*

Critics of the Occupational Safety and Health Administration (OSHA) are worried that the agency may take advantage of a current review of cotton dust standards to relax present regulations. This could thus jeopardize the claims of thousands of workers who have filed for disability because they suffer from brown lung disease or byssinosis, a severe respiratory illness.

OSHA is scheduled to propose revised cotton dust standards by the end of the year and some scientists and labor groups are concerned that the agency is relying heavily on a handful of reports that they claim are seriously flawed—including a study by the National Academy of Sciences on byssinosis research.

J. Donald Millar, director of the National Institute for Occupational Safety and Health (NIOSH), recently attacked the byssinosis study in a letter written to Academy president Frank Press. "This document is both depressing and distressing," Millar remarked in a letter dated 25 August. "It is depressing in its narrowness of viewpoint, in the superficiality of its review of the literature and in the glibness of its tone. It is most distressing from the point of view of public health and preventative medicine." Millar called for a second panel to examine the issue again.

OSHA's review of the cotton dust standard is the subject of a hearing on 22 September before the House investigations and oversight subcommittee of the Science and Technology Committee. The subcommittee, chaired by Albert Gore, Jr. (D-Tenn.), will hear testimony from many of the chief actors in the cotton dust debate. The witness list includes Millar; James Merchant, a leading scientist in byssinosis research; Jerome Kleinerman, chairman of the Academy's byssinosis committee; and labor and industry leaders.

OSHA stated last February that "new health data" might necessitate changes in cotton dust regulations that were originally issued in 1978 under the Carter Administration. The health data, however, were never specifically identified in the agency's notice in the *Federal Register*. According to John Martonik, OSHA's deputy director of health standards, the information included reports on byssinosis by the Academy and the textile industry, but he declines to say

how much significance the agency is placing on the reports.

The Academy study, in particular, has upset many researchers of brown lung disease because it failed to state clearly that the disease, as a chronic ailment, is directly related to cotton dust exposure. This correlation is widely accepted by most epidemiologists in byssinosis research. It was also recognized by OSHA when it set down the cotton dust standards in 1978.

But the Academy report, a \$100,000 study sponsored by the Department of Agriculture and published in February, said that the relationship between exposure and chronic respiratory disease has yet "to be resolved." The conclusion was hotly contested by committee member Kaye H. Kilburn, director of pulmonary and environmental medicine at the University of Southern California and an epidemiologist who has extensively studied brown lung disease. He wrote in a minority report that it was "not defensible" to doubt or deny that the chronic ailment is linked to cotton dust exposure.

Several other epidemiologists not on the panel also protested the Academy's findings. They said in a joint statement in March that the study "is a misleading representation of the current state of knowledge of byssinosis." The cosigners were James Merchant of the University of Iowa, Richard Schilling of Britain's Medical Research Council, Gerald J. Beck and E. Neil Schachter of Yale, and David H. Wegman of Harvard's School of Public Health.

Kilburn said in a recent interview, "Things we thought were cast in concrete started to become fluid again. I didn't think the report was fair-minded." He and Merchant, who have collaborated on byssinosis research, and the Amalgamated Clothing and Textile Workers Union contend that the 12-member panel was not balanced in scientific expertise. Kilburn, for example, was the only epidemiologist selected from the many who have concluded from their own research that chronic byssinosis is directly related to cotton dust exposure. The only other epidemiologist on the Academy committee was Hans Weill, a professor at Tulane University School of Medicine. He believes that the relationship has yet to be demonstrated definitively and argues

that respiratory illness is associated with the environment of a particular mill rather than cotton dust exposure per se.

The textile workers union charges that the Academy panel was tilted heavily in favor of industry. Eric Frumin, safety and health director of the union, points out that Weill conducted a lengthy study on workers that was funded by the American Textile Manufacturers Institute, the industry's chief lobbying group. Two other committee members, Raymond Fornes and Solomon Hersch, are from North Carolina State University's School of Textiles which receives hefty support from industry, Frumin says. He charges that Mario Battigelli of the University of North Carolina has testified on behalf of industry at hearings in 1977 on cotton dust standards. Battigelli said in an interview that he did testify at the invitation of industry but he did not receive any compensation for his appearance, even for travel expenses.

Some scientists who peer-reviewed the Academy report also faulted its conclusions, but their specific complaints are unknown. Academy president Frank Press said obscurely in a covering letter that the reviewers and the committee "were not able to resolve completely their differences of opinion. [T]he difference . . . is of social significance."

Academy officials respond that the committee members were selected for their varying opinions and expertise on a sensitive issue. The report was "a nice, balanced statement," said Daniel Weiss, the Academy's staff member who was executive secretary to the committee. He said that Kilburn's criticism took everyone by surprise and that Merchant's comments were simply sour grapes because he was not asked to participate. Merchant replied that if the report's conclusion had been different, he would have no problems with the study.

The textile workers union and others also criticize two health surveys conducted by the American Textile Manufacturers Institute and submitted to OSHA for review. Based on information reportedly culled from 150,000 workers, the industry group concluded that the problem of byssinosis was far less significant than expected. The National Institute for Occupational Safety and Health looked over the results and wrote a

withering critique of the survey's methods. In a memo to OSHA, agency officials said that the survey design employed by [industry] "violated basic premises of epidemiology. NIOSH recommends to OSHA that these surveys be disregarded as credible scientific investigations. . . ."

An industry official said that the survey was admittedly a "quick and dirty summary" that was not meant to be a definitive study.

The industry group also recently submitted another report to OSHA, this one by Harold Imbus, the former medical director of Burlington Industries. Like the survey, the study concludes that brown lung disease is not as prevalent as predicted. According to OSHA scientists and the textile workers union, the study

has some serious drawbacks. Gore is expected to question industry and Imbus at length about the study at the upcoming hearing.

Another study that will add to the continuing controversy over the cotton dust standard is a recent byssinosis study by the World Health Organization. In contrast to the Academy's report, a committee of international scientists chaired by Merchant, examined virtually the same information and arrived at a different conclusion: chronic byssinosis is caused by cotton dust exposure.

It is difficult to speculate what weight OSHA is placing on any of the reports. OSHA's Martonik is vague but hints that the cotton dust standard may not change drastically. He said that the Academy report represents the best opinions in the

field but other reports must be considered as well. The industry survey, he said, provides "an indication of conditions, but is not a final analysis." Martonik said that OSHA has been concentrating its efforts more heavily on the nontextile segment of the industry and whether it should be regulated. Knitting, hosiery, and waste-processing factories are currently exempt from the cotton dust standards.

Nevertheless, many scientists and the labor union are nervous that OSHA plans to weaken the regulations that govern the textile industry. They note that President Reagan is keeping his promise to seek regulatory relief for industry and that OSHA administrator Thorne Auchter has been a good team player.

—MARJORIE SUN

## Export Control Threat Disrupts Meeting

*Participants at SPIE meeting scrambled to withdraw their papers upon learning that they may not have gotten proper clearances*

By all accounts, the 26th annual technical symposium of the Society of Photo-Optical Instrumentation Engineers (SPIE) was a shambles. More than 2700 people from 25 countries, including the Soviet Union, attended the meeting, which was held at the end of August in San Diego. But at least 100 of the 700 papers listed in the program were withdrawn at the last minute by frightened and confused authors, acting in some cases under orders from their supervisors or contracting agencies, after the Department of Defense let it be known that some of the scheduled presentations might violate government export regulations. These regulations are designed to keep military-related high technology out of Soviet hands.

The incident is unprecedented and it is being perceived as the most dramatic example to date of Reagan Administration's determination to clamp down on technology transfer. Says Joseph Yaver, executive director of SPIE, "We've lost a few papers here and there but never anything of this magnitude." And the ramifications of the incident are widespread. Some members of SPIE are worried that their freedom to openly discuss their research is threatened and, according to Yaver, a number of members have withdrawn from the organization, reasoning that it is on the DOD's hit list. One large corporation requested that its

papers, which were presented at the conference, not be published in the conference proceedings. Other participants asked for refunds of their registration fees. "The whole fabric of our society is unraveling in our hands," Yaver moans. This episode, moreover, could have an adverse effect on other meetings where potentially sensitive technologies are discussed.

Government officials also are concerned: George Keyworth, the President's science adviser, put out a statement saying, "OSTP [the Office of Science and Technology Policy] wasn't involved but there obviously has to be some reconciliation between a legitimate concern for technology transfer and an unfettered pursuit of research, particularly in the international scientific community. I think the incident at the photo-optical conference was both unfortunate and ill-timed." A Pentagon official remarks, "The recent events could endanger the constructive efforts of many to foster a healthy DOD-university relationship." The incident comes just before a DOD-National Academy of Sciences panel is scheduled to release a report on technology transfer so it is seen by some observers to have occurred at a particularly inopportune time.

The SPIE incident, which was first brought to public attention by *Science*

*News*, which had a reporter at the meeting, began on Wednesday, 18 August—just 2½ days before the conference registration was to begin. A military officer appeared at the offices of the Pentagon's international security division carrying the SPIE program. He had only recently become aware of the program's contents and was concerned that defense-related technical information was scheduled to be presented. Most of the meeting participants were under contract to the Defense Department or were Defense Department employees—which meant that they were required to get Pentagon clearance before presenting papers at an international conference. The papers included presentations on reconnaissance, characterization of battlefields with electro-optical equipment, image processing, military applications of infrared technology, and fiber optics. Had all of these papers been cleared, the officer asked?

"We looked at the program," says a Pentagon official, "and we called in five or six experts on technology control. We agreed to a man that it was an extraordinarily bad situation." Most of the sensitive papers had not been submitted for clearance. The Pentagon then sent out messages to all DOD personnel and contractors who were scheduled to make presentations at the meeting saying that, if they were planning to discuss defense-related technical information and if they