



INTER-OFFICE CORRESPONDENCE

To: L. B. Grant, M.D.

Date: July 6, 1977

From: Z. G. Bell, Jr.

Location: 10 West

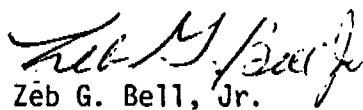
Subject: VDCM Workpractice
Medical Surveillance Section

As per your recommendation on incorporating the medical surveillance section of the VCM guideline into the VDCM guideline, this is a task that will require a meeting since there are certain paragraphs where a conflict may exist and some rewording will be necessary. As an example, there is no "action level" for VDCM. We use this concept for monitoring the air levels only. I have not received any comments on my letter dated April 21 with reference to the VCM meeting held on March 29 in Lake Charles.

We also must recognize that Caribe will not be directly affected by the VDCM workpractice guideline. Plans are in the mill to eliminate or transfer the Natrium drum filling to Lake Charles.

I do think that it is very important to get the VDCM workpractice to Lake Charles soon since a considerable amount of time has elapsed from our original draft proposal.

We can always revise the guideline at a later date.


Zeb G. Bell, Jr.

/zak

cc: F. C. Dehn
P. J. Snyder

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not technically or economically feasible in a split decision by the Occupational Safety and Health Review Commission.

The ruling of the three-member tribunal came April 18 in *West Point Pepperell, Inc.* (No. 8255), modifying a report by Review Commission Judge Erwin L. Stuller.

The employer was cited for a violation of 29 CFR 1910.95(b)(1) for failure to use feasible engineering or administrative controls to reduce noise levels in two weaving rooms of its Lindale, Ga., plant. At work stations in weaving room #2, which contained 112 Draper shuttleless looms, a steady noise level of 97 dBA was recorded, and in weaving room #3, with 1,178 Draper fly shuttle looms, 103 dBA was measured. Since employees in both rooms worked about 7 1/2 hours per day, the noise exposure considerably exceeded the permissible level of 90 dBA for an eight-hour day.

Judge Stuller credited the testimony of the Labor Department's expert witness, J. Ronald Bailey, that noise reduction kits were available from the manufacturer for the looms in room #2 and could be expected to reduce the noise there by about 8 dBA. The judge rejected contrary testimony by the employer's witnesses as unpersuasive. With regard to room #3, Judge Stuller held that the secretary had failed to prove that feasible controls would bring the noise level down to 90 dBA. Accordingly, the judge affirmed the citation as to room #2, but found no violation with respect to room #3.

Majority Opinion

On review, Commissioner Robert D. Moran, joined by Chairman Frank R. Barnako, vacated the citation in its entirety. Moran found the testimony of Bailey too speculative to be relied on, noting that the suggested controls for room #2 had never been tested in an operating mill. According to Moran, Bailey, "by his own admission, had absolutely no practical knowledge of the feasibility of noise attenuation devices in a textile mill."

Commissioner Moran also rejected a recommended administrative control method, rotation of exposed employees on a four-hour shift, as excessively costly. Moran accepted the employer's estimates that the rotation and cross-training of 380 employees would cost nearly \$5.4 million during the first year and over \$2.6 million per year thereafter.

Cleary Dissents

Commissioner Timothy F. Cleary took strong exception to the majority's treatment of Bailey's testimony and its findings and conclusions. Cleary called Moran's discussion of Bailey's qualifications "incredibly misleading," noting that Bailey is a leading expert on noise problems in the textile industry and has done experimental noise reduction research on the type of looms in question. In contrast, according to Cleary, the employer's experts were not trained in acoustical engineering.

The majority also erred, Cleary contended, in disregarding Bailey's testimony that the suggested controls could be installed for about \$20 per loom and that the necessary techniques and materials had been available for many years. The employer's responsibilities under the standard "include at least the adaptation and application of existing technologies to reduce excessive noise in the workplace. . . . The employer cannot sit idly by in the face of such knowledge and wait for others to develop for the marketplace engineering control methods that are adaptable to his particular worksite," Cleary added.

Furthermore, Cleary argued, the majority's approach places an impossible burden of proof on the Labor Department, requiring it to "undertake extensive independent research and development of noise reduction techniques for each industry . . . [and] to enter each worksite to conduct

further testing in order to determine how to apply such techniques in a particular work environment." The secretary "was never intended to shoulder such a burden as it would result in a complete frustration" of the purposes of the Occupational Safety and Health Act, Cleary continued. Since the evidence indicates "a strong probability that the suggested engineering methods would substantially attenuate" noise levels in both weave rooms, the citation should be affirmed in its entirety, Cleary concluded.

This ruling will appear in a future Decisions supplement.

General Policy

RESEARCH DATA FAIL TO INDICATE CARCINOGENICITY IN VINYLIDENE CHLORIDE

Results of recent animal tests involving vinylidene chloride fail to provide any solid evidence that the substance is carcinogenic or teratogenic, according to presentations at an April 22 forum on vinylidene chloride sponsored by the National Institute for Occupational Safety and Health.

Lawrence Rampy, group leader, Dow Chemical U.S.A., stated that preliminary results of an ingestion study conducted by Dow and sponsored by the Manufacturing Chemists Association indicated that the incidence of tumors in rats given doses of VDC in drinking water was not significantly higher than that of unexposed rats.

Three groups of rats showed a "slight increase" in male mortality early in the study, but female mortality was comparable to that of the control group, Rampy reported. Body weights and organ weights for the exposed rats also were comparable to those of the unexposed animals.

No clinical signs of vinylidene chloride toxicity were found in an inhalation study involving exposure to levels of 10, 40, and 75 parts per million, Rampy added. Cumulative mortality data showed little difference in death rates of exposed and unexposed rats, except for a "slight increase" late in the study among rats exposed to the 75 ppm level. Test results indicated "minimal" liver injury in exposed rats, and no increased tumor incidence, according to Rampy.

Results of an Environmental Protection Agency study seem to indicate that vinylidene chloride is a "weak" teratogen in mice, according to William Marcus, chief of testing, EPA office of toxic substances. There is "no doubt" that the effect is real, but the researchers "do not know how to attribute it to VDC," according to Marcus.

"Dose-related" hydrocephalus and hydronephrosis of the small kidney were found in the fetuses of mice exposed to 15, 41, and 54 ppm of vinylidene chloride, Marcus reported. No discernible dose-response effects were noted in rat fetuses, except for changes in fetal weight, he added.

F. J. Murray, Dow senior research toxicologist, told the meeting that Dow inhalation and ingestion studies involving rats and rabbits showed no teratologic effects at any of the levels tested (20, 80, and 160 ppm for rats and 80 and 160 ppm for rabbits). He added that VDC appeared to be embryotoxic at levels that also were toxic to the mother.

Less vinylidene chloride is metabolized at high doses than at low doses, according to Michael McKenna, Dow research toxicologist. In a study sponsored by MCA and conducted by Dow, fed rats exposed to 10 ppm of VDC retained 4.75 percent of the substance in their bodies, while fed and unfed rats exposed to 200 ppm retained 6.18 percent and 10.52 percent, respectively.

BASF Wyandotte Study

NIOSH is "not ready" to make an association between vinylidene chloride exposure and liver impairment found

among workers at a BASF Wyandotte plant in South Kearny, N.J., according to Bobby F. Craft, director, NIOSH division of surveillance, hazard evaluations, and field studies.

Craft noted that NIOSH came into the plant in 1976 after company blood tests indicated abnormalities among VDC-exposed workers. Some 45 employees were tested by the company, of whom 31 percent were found to be normal, 56 percent to have moderate liver abnormality, and 13 percent to have severe liver impairment.

Some 256 of the 292 workers employed at the plant were given five liver tests by NIOSH, according to Craft. The "vast majority" of the workers had only one abnormal reading, and no one had as many as five.

The results of the BASF tests are comparable to those of liver tests conducted at other plants, Craft reported. He added that test results in the BASF dispersion operation, the area of the plant where VDC exposure occurred, were similar to those in other parts of the plant.

NIOSH does not know at this point "what all of this means," Craft conceded, adding that the institute still is doing research at the plant and will recommend that the company develop a careful medical surveillance program for its employees. He noted that some 300 substances are used in the plant, some of which are described in medical literature as capable of causing liver damage.

Mortality Study

NIOSH intends to carry through with its plans to conduct a retrospective mortality study of VDC workers during fiscal 1977, but is having difficulty finding a suitable cohort for study, according to Cynthia Robinson, epidemiologist with the NIOSH industry-wide studies branch, division of surveillance, hazard evaluations, and field studies.

To determine whether there is any association between vinylidene chloride exposure and subsequent employee deaths, Robinson told the meeting, NIOSH first must locate a group of workers who have had sufficient exposure to the substance. There also must be an adequate latency period (preferably one of 15 to 20 years following onset of exposure), and a large enough group of subjects to produce significant results. In addition, there must be careful monitoring to determine whether there has been exposure to any other substances, and personnel records must be available.

Robinson noted that VDC-exposed workers at the BASF Wyandotte plant mentioned by Craft were not a suitable group for study, for these reasons:

- ▶ The latency period was not long enough (only 10 years).
- ▶ The group of exposed workers was too small, comprising only 25 to 30 workers in all.
- ▶ The workforce was not stable, having worked at plants other than the BASF Wyandotte facility.

Other plants have been considered for the study, and have been rejected for the same reasons, Robinson noted. She reported that the search for a cohort is continuing.

Mine Safety

SENATE SUBCOMMITTEE APPROVES BILL GIVING AUTHORITY TO LABOR DEPARTMENT

A bill that would make all miners subject to most of the standards of the 1969 Federal Coal Mine Safety and Health Act and transfer the responsibility for that law from the Interior Department to the Labor Department was favorably reported April 20 by the Labor Subcommittee of the Senate Human Resources Committee.

The full committee plans to consider the bill (S 717) May 3. Similar legislation (HR 4287) was approved by a House Education and Labor subcommittee April 5. The House committee intends to mark up the bill May 4 (Current Report, April 7, p. 1390).

During its markup session, the Senate subcommittee agreed to an amendment proposed by Senator Richard Schweiker (R-Pa), which provides that the Labor Department may issue a civil penalty closure order if a mine operator has a history of repeated violations that could have resulted in serious physical harm or death.

Under the original language of the bill, the Labor Department would have to show gross and willful negligence. Schweiker explained that his amendment has a "tighter, more stringent definition of unwarranted failure" and therefore places an "easier burden of proof on the Government."

Senator Jacob Javits (R-NY) suggested that Schweiker's amendment refer to a pattern of violations, rather than a history of violations, because "pattern" has been used in various laws and has a history of court interpretation.

The subcommittee decided to accept Schweiker's amendment in principle and to allow its staff to work out the amendment's final language, which would be considered by the full committee.

Changes in S 717

The committee print of S 717 Federal Mine Safety and Health Amendments Act of 1977 which was approved by the subcommittee included certain changes to the bill which were made since its introduction. Following are the changes made to S 717 by the subcommittee:

▶ Following the request of the Interior and Labor Departments, some of the time limitations for the steps in standards making were increased. In addition, a requirement that hearings begin within 60 days of the announcement of a request for a public hearing on a proposed rule was added. With this addition, a time limit was established for each step in the rulemaking process.

A new Section 102 (a) (4) dealing with the final promulgation of standards is patterned after a provision of the Coal Act (Reference File, 71:8501).

Section 102 (a) (5) (B) was amended to reduce from 36 to 18 months the period for compilation by the National Institute for Occupational Safety and Health of a list of toxic materials found in mines. Additional language clarifies the intent that NIOSH develop proposed standards dealing with these substances separately instead of as a part of making the list.

▶ The provisions on limited noncompliance orders and variances have been deleted. A new, general variance provision (Section 102 (e)), patterned on Section 301 (c) of the Coal Act was substituted.

▶ The provision establishing inspection procedures was eliminated and a new Section 104 (a), patterned on the procedures contained in Section 103 (a), (b) (1), and (b) (2), of the Coal Act, was substituted.

The minimum number of inspections (Section 104 (a)) was changed from four per year for all mines to four for underground mines and two for surface mines. Authority also was provided for the Labor Department to establish minimum inspections based on observed hazards. The Administration proposed an annual minimum of four inspections for underground mines and no minimum for surface mines.

▶ The right of miners' representatives to accompany inspectors (Section 104 (e)) was expanded to include the right