

EXHIBIT
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Current Report

Lead

LONG-RANGE OPTIONS FOR CONTROLLING LEAD CAN BE CONSIDERED IN EVALUATING COMPLIANCE

Citations for failure to meet the deadline for preparing compliance plans under the Occupational Safety and Health Administration's lead standard will not be issued to employers in the primary and secondary smelting and battery manufacturing industries if the employer has initiated a study of long-range control options and has met other requirements, according to a draft field directive by OSHA.

Under a schedule set by OSHA June 5 pursuant to its earlier lifting of a stay of the lead standard for those industry sectors, companies in the primary and secondary smelting and battery manufacturing industries must have compiled all information for their compliance plans by July 1 and they must have updated plans available by Aug. 1 (Current Report, June 7, p. 3).

The field directive is an attempt to provide guidance regarding the agency's enforcement policy for the compliance plan provisions of the lead standard. OSHA noted that a citation would not be issued for failure to meet the Aug. 1 deadline if the employer's compliance plan met the guidelines described in the field directive.

OSHA's draft directive particularly deals with paragraph (e)(1)(i) of the standard which states that "wherever the engineering and work practice controls which can be instituted are not sufficient to reduce employee exposure to or below the permissible exposure limit, the employer shall nonetheless use them to reduce exposures to the lowest feasible level."

The guidelines set out in OSHA's draft field directive would require an employer to have initiated a long-range study option, "either on its own or through active participation in a cooperative assessment with OSHA and employee representatives, such as the Cooperative Assessment Program (CAP)." OSHA has been attempting to encourage and develop formalized cooperative programs between unions, the government, and the various sectors and companies within the lead industry (Current Report, Feb. 2, p. 947).

In addition to the long-range option, an employer's compliance plan would have to include the following:

- ▶ The control option under consideration.
- ▶ A description of the study, including the study design, the name of the organization performing the study, the study's anticipated completion date, and any appropriate interim deadlines.
- ▶ The specific reasons why the study will be delayed beyond the Aug. 1 deadline.
- ▶ A statement of the employer's intention to incorporate the control into its compliance plan, "if it is found by the employer to be feasible and effective in the employer's workplace."
- ▶ A tentative schedule for implementation.

Additional Review of Citations

The agency has also recommended in the draft field notice, which is sent out to all regional administrators and

area directors, that citations based on alleged violations of this portion of the standard should be sent to the Office of Health Compliance Assistance for review before issuance. This is to assure "consistent application of this enforcement policy," the draft OSHA notice said.

Michael Wright, industrial hygienist for the United Steelworkers of America, maintained that the field directive should handle any "legitimate complaints" from industry organizations on the compliance plans. He added that there is no indication that the cooperative assessment program will slow down the implementation of companies' compliance programs.

Robert Wilbur, director of government relations for the Battery Council International, said the draft field directive explained some "common sense procedures" for dealing with long-range studies. He said the Battery Council doesn't have any major problems with the draft directive.

The directive is expected to be issued in final form in August, an OSHA staff member told BNA July 10.

Asbestos

ENGINEERING, WORK CONTROLS SHOULD BE USED TO ATTAIN LOWEST FEASIBLE LEVEL, AIA SAYS

The permissible exposure limit for asbestos should be reduced to the lowest level feasible through engineering and work practice controls, representatives of the Asbestos Information Association testified July 6 at Occupational Safety and Health Administration rulemaking hearings on asbestos.

AIA's testimony came in the third week of the hearings, which began June 19 and which have featured presentations by other industry groups and by organized labor and government agencies (Current Report, June 21, p. 35; June 28, pp. 60, 61; July 5, pp. 140, 141).

OSHA should not rely on respirator use when engineering and work practice controls can feasibly achieve the PEL, B.J. Pigg, executive director of AIA, stated. He maintained, however, that in some settings it may be desirable to supplement such controls and urged OSHA to consider the following options:

- ▶ A requirement that feasible engineering and work practice controls that are shown to yield significant exposure reduction benefits be implemented even in workplaces that are achieving the new PEL.
- ▶ A program to reduce substantially or eliminate smoking among asbestos workers.
- ▶ A program to achieve respirator use even where the PEL has been achieved through feasible engineering and work practice controls.

Pigg also recommended a separate standard for asbestos in the construction industry. "We cannot, however, in general, support the Building and Construction Trades Department's proposed construction standard because its underlying premise is that OSHA should eliminate all exposures to asbestos," he said. Pigg explained that, although OSHA is mandated to eliminate significant risks to the extent feasible, a standard that attempts to eliminate all workplace risks is just as unreasonable for asbestos as it would be for any workplace hazard.

'Simple' Standard Needed

The AIA maintained that significant risks can be eliminated in the installation of new asbestos-containing products through the use of recommended work practices since "almost all asbestos products marketed today occasion only very low exposures and then only for brief periods." Pigg stated that, in urging OSHA to focus on work practice requirements for the installation of new products as well as in regulating renovation and demolition activities, the association is expressing its belief that the agency can develop a simple but effective standard for the control of asbestos exposures.

"We are concerned that if OSHA regulations impose a multitude of additional ancillary requirements, such as extensive monitoring and reporting, the regulation will be too complex for contractors to follow, too difficult for OSHA to enforce, and ultimately ineffective," according to Pigg. "No standard is of any usefulness to protection of worker health, regardless of how comprehensive, unless compliance is achieved on the worksite."

Marcel Cossette, director of research and technology for Societe Nationale de L'Amiante, a state corporation wholly owned by Quebec which operates most of the asbestos mines and milling operations in Quebec, also offered testimony concerning asbestos measurement and monitoring on behalf of the Asbestos Information Association. He recommended that any proposed substitute analytical procedure must be proven suitable by formal trials prior to its adoption. He asserted that the National Institute for Occupational Safety and Health had admitted that it has not tested its new asbestos analytical method, Method 7400, but has merely constructed it based on extrapolation from the current method.

Asbestos measurements made through phase contrast microscopy do not reflect the true airborne concentration of all asbestos fibers regardless of size, but rather represent only a small subset of all fibers meeting a generally defined size and shape criteria, according to Cossette. The lower bound on the diameter of a countable fiber is unspecified and consequently depends on the limit of visibility of the slide-/microscope/counter combination, he asserted.

'Unpredictable' Changes

"This limit of visibility along with other factors such as the graticule size and the counting rules affect the level of the index obtained on a sample," he noted. "A series of contemporaneous changes in the method as has been made by NIOSH will result in completely unpredictable changes in measured results." For this reason, Cossette advocated a requirement by OSHA for testing of the method.

Another reason for OSHA to require testing is NIOSH's admission that in some undefined circumstances, the method cannot be used over its entire working range due to nuisance dust loading, according to Cossette. Other issues of practical field application of the method also need exploration, such as the effect of higher pumping rates on the capture efficiency of large agglomerates, he noted.

"It is likely that Method 7400 will leave a large measure of inter-laboratory variation," he stated. Prior to adopting Method 7400, OSHA should obtain testing information confirming or denying the claims for the new method, Cossette maintained. He suggested that OSHA particularly determine the inter-filter, intra-laboratory, and inter-laboratory variabilities associated with the existing and candidate methods, the realistic limits of reliable detection for each, and the

comparability of measurement results between the old method and the candidate methods.

Cossette suggested that a small round-robin exchange of optimally loaded filters from various sectors should provide the needed variability and comparability information, assuming a proper experimental design is followed.

In presenting conclusions of a feasibility study conducted earlier this year for the Asbestos Information Association on occupational asbestos dust controls, Gordon M. Bragg, a professor of engineering at the University of Waterloo, stated that a PEL established at 0.5 fibers per cubic centimeter is likely to result in indefinite full-shift respirator use at a few work stations in each major asbestos industry sector. In addition, he asserted that a PEL established at 0.2 f/cc is likely to result in indefinite full-shift respirator use in a large majority of primary industry work stations.

"Unless appropriate provisions are made for necessary lead time to produce exposure reductions through engineering controls and work practices, temporary full-shift respirator use will be widespread for one or two years even in those workplaces that will ultimately be able to consistently achieve the new PEL," Bragg said.

He suggested that OSHA incorporate a realistic variability model of exposure incidences into its feasibility determination. "Without this conceptual framework, OSHA cannot clearly assess the implications for employers and the effects on employees of establishing a PEL at any particular level," Bragg asserted.

Variability in exposure conditions from one day to the next is a fact that employers "must explicitly consider" in designing their dust control programs, he said. Maintaining that employers generally aim to achieve average airborne asbestos levels between one-half and one-quarter of the PEL to assure compliance, Bragg complained that establishment of the PEL at the lowest level that can be achieved on average deprives employers of their operating margin and exposes them to a "constant fifty-fifty chance of citation" by an OSHA inspector.

Establishing the PEL above the lowest achievable average level by a fair operating margin will reduce markedly the frequency of unjust citations to complying employers, produce significant differentials in citation frequency between employers using "best" controls and those using less than "best" controls, and consequently, will provide a sensible incentive for all employers to achieve "best" control status, Bragg contended.

Formaldehyde

UAW APPLAUDS COURT DECISION REQUIRING OSHA TO RECONSIDER FORMALDEHYDE ETS, RULEMAKING

The United Auto Workers said a July 2 federal district court ruling, which requires the Occupational Safety and Health Administration to reconsider the need for an emergency temporary standard (ETS) for formaldehyde, is a recognition by the court that OSHA is violating its duty to protect workers against job hazards.

In *International Union, United Automobile, Aerospace, and Agriculture Implement Workers of America, UAW, et al. v. Raymond J. Donovan, et al.* (No. 82-2401), the U.S. District Court for the District of Columbia required the agency to reconsider the need for an ETS and permanent rulemaking proceedings. However, the court declined to compel OSHA to issue an ETS (Current Report, July 5, p. 139).

UAW originally petitioned the court last year for an order that would force OSHA to issue an ETS, to which the agency replied that there was lack of evidence of a grave danger needed to issue a temporary standard (Current Report, Aug. 18, 1983, p. 291; Nov. 17, 1983, p. 663).

Frank Mirer, director of the UAW's health and safety department, said in a July 2 statement, "Today's ruling supports our belief that the politically oriented leadership of OSHA has violated its duty to protect workers against job hazards."

Don Morgan of Cleary, Gottlieb, Steen and Hamilton, counsel for the Formaldehyde Institute, which filed as intervenors in the case for OSHA, said the institute agreed with the court's decision not to compel an ETS. He said the institute doesn't see any "significant risk" from the current use of formaldehyde, adding, however, that the organization will cooperate with OSHA and provide further information if a rulemaking is conducted.

Asbestos

VANDERBILT URGES REVISED DEFINITION OF ASBESTOS TO EXCLUDE NONASBESTIFORMS

The current definition of asbestos contained in the Occupational Safety and Health Administration's standard for occupational exposure to asbestos is "scientifically wrong and in need of immediate correction," Allan Harvey, director of environmental affairs for the R.T. Vanderbilt Company, Inc., testified July 5 at rulemaking hearings held by the agency.

OSHA issued its proposed asbestos standard in April (Current Report, April 12, p. 1195), and hearings began June 19 (Current Report, June 21, p. 35; June 28, pp. 60, 61; July 5, pp. 140, 141).

Harvey noted that for the past 12 years, OSHA's definition of asbestos "has not only stated that chrysotile, crocidolite, and amosite are asbestos, it has also suggested that all tremolite, anthophyllite, and actinolite must be treated as asbestos regardless of whether those minerals are of the asbestiform or nonasbestiform variety." This definition has resulted in undue and unnecessary hardship to various industries, especially those involved in the production of nonasbestiform amphiboles, he said.

Vanderbilt supports the agency's proposal to exclude the nonasbestiform varieties of tremolite, anthophyllite, and actinolite from its definition of asbestos as well as OSHA's proposal to include only particulate forms of asbestos in its definition of an asbestos fiber, according to Harvey. He added, however, that the "fiber" definition suggested by OSHA requires further clarification and amplification.

Harvey maintained that the 3:1 aspect ratio is not an adequate asbestos fiber criterion, especially if it is used as the sole criterion to identify the mineral particles that are known to be asbestos. "It simply does not accurately characterize an asbestos fiber," he charged, adding that if it were used in any environment other than where asbestos was being mined, milled, fabricated, or installed, only false data would result. "Because particles produced by many nonasbestos mineral industries like ours satisfy the simple 3:1 aspect ratio criterion, the consequences of inadequate asbestos definitions become quite apparent." Harvey stated that during processing a significant proportion of nonasbestiform amphiboles are fractured into fragments with lengths greater than five micrometers and aspect ratios greater than 3:1.

Without adequate definitions of asbestos and asbestos fiber, these fragments can be alleged to be asbestos particles, he said.

Differing Crystal Growth Patterns

Other regulatory agencies have qualified their listing of asbestos by designating the asbestiform varieties of tremolite, anthophyllite, and actinolite as "tremolite asbestos, anthophyllite asbestos, and actinolite asbestos," according to Harvey. He asserted that OSHA remains the only regulatory agency that does not specify the asbestiform varieties of tremolite, anthophyllite, and actinolite as regulated minerals. Although it is "reasonable to assume that OSHA never intended to regulate the nonasbestiform varieties of tremolite, anthophyllite, or actinolite," he noted that, without this specification, it could be suggested that nonasbestiform varieties of these minerals are subject to regulation as asbestos.

C.S. Thompson, manager of research and development for the minerals, ceramics, and paper department of Vanderbilt, explained that each asbestiform mineral and its nonasbestiform counterpart have the same chemical composition and crystal structure, but the forms differ in the manner of crystal growth. An asbestiform mineral is a result of a very uncommon crystal growth in basically only one dimension, while its nonasbestiform counterpart is the product of two or three dimensional crystal growth, he said.

According to Thompson, it is widely held by mineralogists who have studied the issue that asbestos fibers generally have aspect ratios ranging from 20 to 1 to 1,000 to 1 or even higher, and very thin fibrils with aspect ratios generally less than one micrometer in width. In addition, asbestos fibers have two or more of the following attributes: parallel fibers occurring in bundles; fibers displaying splayed ends; fibers displaying thin needles; matted masses of individual fibers; or fibers showing curvature. He suggested that these characteristics should be the definitive criteria for distinguishing between a particle which is an asbestos fiber and a particle that is merely a cleavage fragment of a nonasbestiform mineral.

PLM Method Recommended

"We would recommend the use of polarized light microscopy as the prime method for the identification of asbestos because both the morphology and mineral identification may be determined," Thompson said. The limitations of this method are essentially those of resolution of very small particles, he added. When identification of very small thin particles is necessary, Thompson recommended the use of transmission electron microscopy coupled with selected area diffraction capabilities. This method allows for the determination of morphology and for the identification of the mineralogy of individual particles by the determination of the crystal structure, he stated.

Ann Wylie, an associate professor of geology at the University of Maryland, also urged that mineralogical distinctions be based upon careful polarized light microscopic examination and X-ray diffraction, rather than on electron microscopy. Once the presence of asbestos has been established, an exposure index must be established and this will probably rest upon a dimensional criterion, according to Wylie. Because the use of a dimensional criterion alone can result in significant problems, Wylie suggested that a combination of electron microscopy, polarized light microscopy, and phase contrast microscopy may all be necessary to

evaluate the concentration of airborne asbestos when the source material contains a great variety of mineral material.

Wylie conceded that it is "probably appealing" to use the definition of a fiber that is currently in place since changes in the definition of what should be counted and what should be measured as an asbestos fiber would be complicated. "However, it seems to me that the alternative of ignoring the facts and leaving the existing regulations in place puts an unnecessary burden on our domestic mining industry, without any obvious benefits for their employees, customers, or the general public," she said.

Research

UAW AND GM LAUNCH STUDY ON EFFECTS OF EXPOSURE TO CHEMICALS IN MACHINING

A comprehensive, five-year scientific study of the health effects of exposure to cutting fluids that are used in General Motors plants to cool and lubricate machine tools was announced by the United Auto Workers and GM.

Scheduled to begin this summer, the study is to be conducted by a team of scientists at the Harvard School of Public Health under the direction of Drs. Richard Monson and Thomas Smith.

UAW Vice President Donald F. Ephlin, director of the union's General Motors Department, and Alfred S. Warren Jr., GM vice president for industrial relations, said the investigation is being undertaken "in response to workers' concerns and scientific speculation that long-term exposure to chemicals in machining and grinding operations may lead to some adverse health effect."

"We need a full and independent investigation," Warren and Ephlin said. "If problems exist, we need to know it so that effective protective measures can be taken."

The cutting fluid investigation will have three components — an epidemiologic study to examine causes of death, a survey of lung function among exposed workers, and an industrial hygiene profile of past and present chemical exposures in machining plants.

UAW Health and Safety Director Frank Mirer told BNA July 5 that the study will examine, in particular, the respiratory effects of exposure to cutting fluids, and the issue of whether these substances pose a cancer hazard.

Mirer reported that the union receives complaints "on a regular basis" about respiratory problems and skin irritations among workers using cutting fluids. Further, he stated, there is a "great deal of British [scientific] literature" on skin cancer associated with types of cutting fluids used in the past, and there also are epidemiological studies of stomach cancer and gastrointestinal cancer cases which "may involve" exposures to water-based mixtures now in use.

The Harvard researchers will conduct on-site investigations in GM plants located in several states over a five-year period.

The announcement of this study came just 18 months after the UAW and GM established a jointly administered Occupational Health Advisory Board. The board was established to advise the UAW-GM National Joint Committee on Health and Safety in the evaluation and development of research projects, occupational health programs, and related activities.

The advisory board will work closely with the Harvard team during the five-year study period and will review the

completed study and recommend appropriate follow-up steps to the company and union.

Scaffolds

DETAILS OF SPECIAL EMPHASIS PROGRAM PROVIDED TO FIELD STAFF IN OSHA DIRECTIVE

Procedures to be followed by agency field staff in carrying out the Occupational Safety and Health Administration's new national emphasis program for inspecting temporary two-point suspended scaffolds were detailed June 22 in an OSHA instruction.

OSHA included the scaffolding systems, which are often used by window washers, in the special emphasis inspection program for high hazard industries and operations because of the high number of fatalities and injuries caused by the scaffolds collapsing (Current Report, June 14, p. 21).

OSHA explained in the directive, Instruction CPL 2.62, that two-point suspension scaffolds consist of the platform; the suspension system, including the rigging used to support the platform; and the hoisting equipment used for raising and lowering the platform. Permanent units, defined as powered platforms, which are used at single buildings are not covered by the emphasis program. Rather, temporary scaffolds which are moved from building to building are the focus.

OSHA's directive explained that all compliance personnel are required to report sites of operations using a temporary two-point scaffolding system. Based on the number of responses the area director expects to receive from compliance personnel balanced against other office priorities and the inspection time available, OSHA area directors will determine the frequency of inspections for the scaffolding units. Area directors must submit anticipated schedules to the regional office within four weeks of the date of the instruction sheet.

Once the area office has achieved the number of inspections the area director has determined to be manageable for the fiscal year, "no further inspection activity need be scheduled," the OSHA directive said. However, the instruction sheet noted that the regional administrator may choose to extend the program, based on local conditions, such as the frequency of scaffolding accidents in the area.

Calculating Number of Inspections

If, under this system, the area director determined that there are sufficient personnel to conduct an inspection for every ninth scaffolding system site, then the area office should schedule an inspection "as soon as practicable," after the ninth site is identified by the compliance officer, "taking into consideration the anticipated duration of the work being performed there."

If the inspection office sees what would constitute a serious hazard, such as a worker who is not "tied off," then an inspection should be conducted immediately.

The OSHA directive also encouraged area offices to develop "outreach programs," including letters to employers using swing scaffolds, such as window washing contractors, explaining the hazards and the OSHA requirements. In addition, the OSHA instruction sheet explained that area offices could distribute fatality reports resulting from accidents on swinging scaffolds in the maintenance and construction industries.