H&S
Industrial Hygiene

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TBB	AUG 29 1979	CCD
RMJ		DB
HGS		LMN
PHS		EDS
MJV		

FROM: G. D. HICKS TO: MEMORANDUM

1979 August 24

RE: ASBESTOS USE REDUCTION OR ELIMINATION

Attached is a copy of a report prepared by Mr. Haig Sakoian, Pittsburgh Industrial Hygiene Staff, regarding the use of asbestos materials throughout the Alcoa system. As can be seen, he has listed the various types of asbestos materials that are in use at each location. Please note that Massena Operations is identified as number 13, as shown on Page 6 "Key to Alcoa Locations".

For your information I have attached a copy of an OSHA Fact Sheet on Asbestos as published in a BNA Occupational Safety and Health Reporter of October 13,1977. I think this will give a better appreciation not only for the hazards generated by exposure to asbestos, but also give you an opportunity to consider engineering costs if we find it necessary to implement these means to meet the worker environment standards. The use of respiratory mask protection is considered only as a temporary expedient while engineering control improvements are being installed or safe work practices are being implemented.

As can be seen from the BNA article the present standard sets an exposure limit of 2 fibers (minimum length of 5 micrometers) per cubic centimeter of air averaged over an 8 - hour period. For easier understanding: 5 micrometers minimum equals 0.0002 inches minimum, a cubic centimeter is equivalent in volume to 20 drops of water. The present standard allows a maximum exposure, to over 1.4 million of the above described particles over an 8 - hour work day. By many health professionals, this is considered still too high an exposure. As shown in a subsequent paragraph, revisions are now being proposed to cut the present standard by one-fourth. The problem is not going to get better.

Mr. Sakoian's listing is of course somewhat general in nature. For our purposes I will prepare a list of asbestos materials in use in each department here at Massena. This list will not only detail the materials, but hopefully will serve as a log of actions taken to reduce exposure or eleminate the uses altogether. We need to make record of our failures in trying alternate materials, as well as, those that succeed. This manner of recordkeeping may prove of value in dealing with OSHA on the matter. I would expect to route the log to all departments involved at least quarterly for up-dating. In this way all departments can take advantage of experience gained throughout the plant.

PLAINTIFF'S EXHIBIT
tabbies
AL-762

Massena plant management is on record that we must push this project hard and eliminate all non-esstential uses of asbestos. We must minimize those applications where asbestos cannot be replaced and its use will have to be ridgidly controlled.

G. D. Hicks

G. D. HICKS

GD/jv

Attachments (Removal Guide)

cc: J. Reid Clark - 1
D. W. Murphy - 3
G. H. Schneider - 303
C. L. Bissonette - 28
J. M. Rushing - 7
Dr. M. J. Elder - 22
D. E. Jackson - 301
R. K. Morrow - 7
J. R. Feeley - 59A
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H. G. Sakoian - Pgh.,I. H.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION FACT SHEET ON ASBESTOS

ASBESTOS FACT SHEET

The Hazard

Asbestos is universally recognized as a serious health hazard. It has long been known to cause asbestosis, a disease involving severe scarring of the lungs. Asbestos also causes a variety of irreversible cancers including malignancies of the linings of the chest cavity (pleural mesothelioma) and abdomen (peritoneal mesothelioma) as well as cancer of the lungs, stomach, colon, and rectum. These diseases are almost invariably fatal. Detection and treatment of asbestosis and asbestos-related cancer is further complicated by the fact that the diseases usually are not clinically evident until 20 years after the first exposure to asbestos. Moreover, there is no known safe exposure level for this carcinogen. Hence, the presence of asbestos in *any* quantity must be considered hazardous.

OSHA's Present Asbestos Standard

In 1972, the Occupational Safety and Health Administration promulgated its current asbestos standard in accordance with the procedures set forth in the Occupational Safety and Health Act of 1970. Under these procedures all concerned parties were afforded the opportunity to testify on the proposal and submit relevant written comments and data.

The current standard regulates employee exposure to asbestos fibers of chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite. These fibers must be at least five micrometers long. Effective July 1976, the standard sets an exposure limit of two fibers per cubic centimeter of air averaged over an 8-hour period (TWA—time weighted average). There is also a maximum concentration of ten fibers per cubic centimeter (ceiling limit).

Compliance with these exposure limits must be achieved primarily through engineering controls (such as exhaust ventilation and dust collection) and work practices (such as wetting materials containing asbestos to prevent the release of hazardous dust). When these techniques are either insufficient in reducing airborne concentrations to permissible levels or not feasible to achieve, they must be supplemented by the use of personal protective devices such as respirators.

The standard requires that every workplace where asbestos fibers are released into the air must be monitored to determine the extent of the hazard to the employees. Employers must also make available annual comprehensive physical examinations to their employees who are exposed to airborne concentrations of asbestos fibers. All raw materials, wastes, or products that contain asbestos fibers which have not been modified by a bonding agent must be labeled as to their potential health hazards. In addition, employers covered by the current standard must maintain personal and environmental monitoring records for at least 20 years.

Proposed Standard

In light of accumulating evidence linking asbestos to cancer in humans, OSHA published a proposed revision to the current standard on October 9, 1975, (40 FR 47652) and solicited public comment on the proposal. The proposed revision applies broadly to every place of employment where asbestos is manufactured, processed, packaged, stored, applied, used, or otherwise handled. However, it does not apply to the construction industry which will be addressed in a separate proposal, nor to workplaces where another Federal agency is exercising statutory authority as the Mining Enforcement and Safety Administration is for the mining and milling industries. An evaluation of the economic impact of the proposal will be made available for public review and comment.

The proposed revision has several significant changes necessary to protect worker health. Under the proposal, no employee may be exposed to an 8-hour time weighted average of asbestos fibers in excess of 0.5 fibers per cubic centimeter of air (versus the present airborne limit of two fibers). The ceiling concentration would limit employee exposure to 5 fibers per cubic centimeter of air over a 15 minute period. An asbestos fiber is further defined by the proposal as an asbestos particulate longer than 5 micrometers with a length-to-width ratio of at least 3 to 1. In addition, an issue in this rulemaking is whether a change in the definitions of asbestos and asbestos fibers would clarify the proposal and properly relate it to known and suspected workplace hazards.

Following the completion of the economic impact statement OSHA will convene public hearings on both the proposed revision and its economic impact. The final asbestos standard will be based on the evidence in the public record including written comments and public hearing.

Tremolitic Talc Controversy

Asbestos minerals, such as tremolite, are often present with talc. Thus, employees in industries which use industrial talcs that may contain asbestos fibers, e.g. the ceramic industry, are subject to asbestos exposure and the related cancer risks. However, a controversy has developed concerning the application of OSHA's asbestos standard to industrial talc products.

The sampling and measuring techniques used by OSHA to determine the asbestos content of industrial talcs have been challenged by some industry representatives. However, the Agency's techniques successfully isolate and identify asbestos fibers in a variety of talc samples by employing the most advanced analytical methods. Moreover, the National Institute for Occupational Safety and Health has endorsed these methods and has confirmed OSHA's results.

In addition, the Agency's asbestos sampling methods have withstood a recent legal challenge. In *Secretary of Labor v. Borg-Warner Plumbing Products*, OSHRC Docket No. 10757 (Judge's decision, June 28, 1976) (pending Commission review), an Administrative Law Judge of the Occupational Safety and Health Review Commission rejected efforts by the employer to discredit the Agency's asbestos analysis techniques. In addition, the manner by which the Agency defines asbestos was also sustained. As a result, the asbestos citations issued to the employer were affirmed by the Administrative Law Judge.

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