



CONSTRUCTION PRODUCTS DIVISION

PERSONAL AND CONFIDENTIAL



To: T. L. Lyall

Date: January 14, 1974

From: R. E. Schneider

Subj: State of Washington -
Health and Safety Report
Spokane, Washington Plant

cc: H. A. Brown
H. C. Duecker
W. R. Wright
H. A. Eschenbach

The attached report by F. W. Eaton records the activities of the December 18th meeting at Olympia, Washington with the Department of Labor and Industries, Division of Safety and Health, State of Washington.

Received in the mail today from W. V. Culver was a copy of an inter-office communication of the Department of Labor and Industries concerning the subject. This should be read carefully. Copies are attached.


R. E. Schneider

RES:h11

Attachments

15190143



CONSTRUCTION PRODUCTS DIVISION

Report on Trip to State of Washington

Frederick W. Eaton - 1/8/73

Subject

Meeting December 18, 1973 - State of Washington, Department of Labor and Industries, Division of Safety and Health. Olympia, Washington.

Purpose

Review Spokane plant safety and health report prior to submission to CPD.

People Present

State of Washington - Roy Mills, Chief Industrial Hygienist, Olympia
Budd R. Neumann, Industrial Hygienist, Spokane
William L. Wilson, Industrial Hygiene Chemist, Olympia

W. R. Grace & Co. - H. A. Eschenbach
F. W. Eaton

Summary of Report and Discussion

During the period of introductions, Eaton introduced himself as head of Environmental Engineering for CPD and Eschenbach as head of Industrial Hygiene for ICG. The general area of responsibility and function of each was described. This little bit of "gilding the lilly" worked to CPD's advantage, as Wilson, a very knowledgeable industrial hygiene chemist, had little to say, and was the person Eaton felt would be a problem during the discussions.

Mills had held up the formal report until the December 18th meeting. It was determined that the best way to tackle the subject was to discuss each item of the rough health and safety report. The summary and discussion of the attached report is as follows:

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- Item 1 - This is the only violation that will be considered a serious violation, with a fine estimated to be in the \$500-1,000 range. The reason this is classified a serious violation is that all fiber counts exceed the ceiling concentration of ten fibers longer than 5 microns per cubic centimeter of air. The samples were taken at the furnace bagger and acoustical plaster mixer.

Sample #	Operation	Fiber Count
AA152	Man bagging 50 bags of #2 expanded	19 fibers/cc
AA1	Bagging acoustical plaster	15.3 fibers/cc
AA2	Charging 8 bags of #2 Vermiculite and one bag of Bentonite	50.0 fibers/cc
AA3	Charging Crysotile Asbestos into the mixer	25.0 fibers/cc

Item 2

AA157	Unloading #4 ore	8.6 fibers/cc
158	Bagging #2 Expanded Vermiculite and driving fork lift truck	6.1 fibers/cc
159	Bagging acoustical plaster	6.8 fibers/cc
AA4	Sewing acoustical plaster bags, sweeping and bagging at furnace	6.5 fibers/cc

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Item 3 - Dust samples taken on this item were for total dust and the threshold limit value (TLV) of 10 mg/cubic meter does not take into consideration any free silica.

Sample #	Operation	Fiber Count
M333	Loading Furnace ore hopper and bagged vermiculite into a truck	11.9 mg/cubic meter
M358	Loading truck, unloading ore from truck and transferring ore to bins	31 mg/cubic meter

Items 1, 2, and 3 are violations of total dust and fiber concentrations above the TLV and have an abatement period of 60 days. The State is aware of CPD's plans for Spokane and a new facility in the Northwest, and suggested that temporary Rube Goldberg corrective action would be acceptable and sufficient to reduce the dust and fiber concentrations down below the TLV. It was stated that if CPD were not required to perform detailed engineering, submit plans and specifications for approval and had no interference from the Spokane County Air Pollution Control Authority, abatement could be accomplished within the 60 day period. It was pointed out to the State that compliance in the ore bin area (unloading and storage) could probably not be obtained. The State suggested partitioning off the bins with polyethylene sheeting so as to keep the bin area separate from the manufacturing area.

Item 4 - This item is complete and a respiratory protection program in effect.

Item 5 - This item is complete. All employees have been issued disposable coveralls.

Item 6 - This item is complete. All disposable coveralls are deposited in plastic bags and the bags labeled.

Item 7 - This item is complete. All waste material containing fibers are disposed of in sewn bags and labeled.

Item 8 - This item of labeling finished product was by-passed until all other items were discussed. This item, likewise, will be discussed at the end of this report.

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- Item 9 - By the time the final report is received at the Spokane plant, this item should be complete. A power sweeper has been ordered and is due about the first of January. If, for some reason, the sweeper has not been put into use before the 30 day abatement period, a copy of the purchase order and vendor's delivery date must be submitted to the State. This evidence will allow the State to extend the abatement period.
- Item 10- This item has been completed. Eschenbach stated that pre-employment physicals and annual physicals had been in effect for quite some time. These records were available at the plant during Neumann's inspection. Eschenbach stated that termination physicals are now in effect, but Grace cannot force employees to take these terminating physicals. It was pointed out that the employees should be given this option, and if he refuses, it should be so noted in the records.
- Item 8 - After the above items had been discussed and the abatement periods agreed, we took up the subject of product labeling. A great deal of time was spent on this subject, and only the high points will be mentioned in this summary. The position taken by CPD was that although no definitive results are available to show that fibers are not present in the product, it was CPD's feeling expanded vermiculite did not contain tremolite fibers. The work CPD did in complying with EPA's NESHAPS and later EPA's determination of applicability on our vermiculite expanding operation was discussed in detail. Also the work by Julie Yang and Arthur D. Little was discussed. Throughout the discussions, the new Northwest plant was brought up along with the purity of Libby ore once the new mill goes on stream.

The main convincing point on this item was a description of the D-18 furnace vent system using a flow diagram and photograph of the D-18 furnace. It was pointed out that air flows are greater than necessary for good dust control and that considerable amount of product is picked up at the various pick up points, but collected in the primary cyclone and eventually returned to the product. By maintaining these high air flows, product size material is collected in the primary cyclone and sub-micron material and fiber pass on to the secondary control device (bag house) and are collected as waste. The stoner operation was explained and it was pointed out that the major portion of the tremolite that can be seen with the naked eye is separated from the product during the stoner operation. Small tremolite fibers that do not come off with the rock are removed in the air stream and collected in the bag house. It was pointed out that one of the reasons for the high fiber count on Spokane's furnace was insufficient air flow at all pick up points, especially the stoner.

After going through the long dissertation of why labels should not be required on vermiculite products, Mills stated that Grace should supply substantiating evidence at the end of the abatement period to indicate that there are no fibers in expanded vermiculite. Eaton pointed out that based on our past research work with EPA, this would be very difficult to do and next to impossible within a 10 day abatement period. Mills agreed after discussing the subject with his co-workers and suggested that this specific item be given a 99 code, which means that the item is recommended, but will have no compliance date or follow up. The 99 code is a computer input, and will never appear as an item requiring corrective action. Mills stated jokingly that one of these days we will conduct our own investigation but since it is on a 99 code, chances are it will be forgotten because of other items coming out of the computer requiring abatement checks.

In summing up the meeting, Mills wanted the plant monitored for fibers during the abatement period, with final samples taken at the end of 60 days to insure that corrective measures taken reduce the fiber count below the TLV. It was pointed out that sampling is only done by the Cambridge Industrial Hygiene Group, and Mills agreed to have samples taken only during February and at the end of the abatement period.

CONCLUSIONS AND RECOMMENDATIONS

The outcome of this meeting has mixed results. From a product labeling standpoint, the issue appears to have been dropped or held in abeyance for the time being. It is recommended that CPD develop a field test program for all vermiculite products as back up information should this subject come up again in the State of Washington, or with any other agency.

As far as continued production at the Spokane plant is concerned, management should fully understand the conditions of compliance and continued operation. Although the State understands CPD's future plans, and has suggested "Mickey Mouse" corrective action for compliance, CPD will still be required to meet the TLV's for total dust, respirable dust, and fibers. Without rebuilding the entire facility, there is no way CPD can comply. To date, we have dealt in good faith with the Department of Labor, and to continue with token means and stall for time will jeopardize the status and position that CPD now has. It is strongly recommended that Spokane be shut down by March 1, 1974.

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4/11/74