CONSTRUCTION PRODUCTS DIVISION

PLAINTIFF'S EXHIBIT WRC-1390



TO: J. D. RIGGLEMAN, Libby
L. M. KRUPP, Libby

DATE: February 17, 1970

FROM: F. W. EATON

SUBJECT: Membrane Filter Sampling

cc: E. D. Lovick, Libby

When I was in Libby, I had a chance to go over the membrane filter method of sampling with Lou Krupp, but did not have the time to discuss this with J. D. Riggleman. In this letter, I will try to review it briefly for both of you, and any details omitted can be obtained from the instruction book that is enclosed.

This is a temporary measure, as you know, and as soon as someone is hired to carry on this and other functions at Libby, both Rex Smith and Walt Baker will be freed of this task. I have given both Rex and Walt a copy of the instructions, but neither got copies of the first part of the manual that deals with the hazards associated with asbestos. Both men were given a short training session on the principles involved in the use of the sampling equipment, and I feel will be capable of carrying out this collateral duty that has been assigned to them. I have asked that they both show the sampled monitor and data sheet to you before it is sent to the laboratory here in Boston.

In the membrane filter method of sampling, we are only concerning ourselves with the collection and reading of tremolite and asbestos fibers that are known to be in Libby ore. Through impingere tests that W. Nordin has conducted we know that the particulate level in the dry mill can be controlled within allowable threshold limit values for total dust. What we don't know is the level of fibers and if we are below the threshold limit value established by the U. S. Public Health (12 microns per cc longer than 5 microns in length). Johns Manville and Grace have established a value of 6 fibers per cc. Sampling is a relatively simple procedure and will in no way interfere with the movement of an operator in performing his normal duties. A vacuum pump is attached to a man's belt and connected, by means of a rubber tube, to a monitor fastened to the operator's shirt collar. The monitor is positioned in the breathing zone of a person and the rate of flow through the vacuum pump at the normal respiratory rate of two leaders per minute. The person being sampled should conduct his normal duties and in no way should deviate from them to be either in a clean or dusty environment. As an example, on February 3 we sampled the top floor dry mill operator for ninty minutes, and during this period of time he made one complete round of the upper floors and dryer area, and the remainder of the time was spent in the operators room on the first level. It is not necessary for either Walt or Rex to follow the men around all the time, but every thirty minutes they should check the vacuum pump to see that it is operating properly and observe conditions in the area being sampled so that the sampling data sheet can be filled out with all pertinent information.

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I have requested that 90 minute samples be taken each month at the following locations at the mine and mill:

Mine Sampling Locations:

1. Two truck drivers (one at each shovel)
2. Two shovel operators
3. Drill operator
4. Grader operator
5. Transfer point
6. Portable laboratory

Mill Sampling Locations:

1. Each mill operator, including the sweeper
2. Area maintenance man
3. Skip hoist operator
4. Truck driver at ore transfer point to river site
5. Operator at river ore storage site.
6. Ore car loader
7. Mill shift tester

There are two complete testing setups at Libby (at the present time, one pump is defective and I will see that it is replaced within a week), and I would recommend that two people be sampled at the same time so that there is less time required of Walt and Rex. In the downtown office, there are approximately fifty mailing tubes to be used in sending the sampled monitors to Werby Laboratories in Boston. I would recommend as soon as you have eight samples either at the mine or the mill that they be sent to Werby, along with one copy of the sampling data sheet. One copy of the data sheet should be retained in Libby and another sent to me here in Cambridge.

Until such time as a permanent person is assigned this task it will not be necessary for you to clean and insert new filters in the monitor, nor calibrate the vacuum pumps. I will see that fresh monitors, ready to use, are shipped to you and you should return the vacuum pumps to me in Cambridge every six months for recalibration.

I appreciate your cooperation and if you have any questions, please do not hesitate to call me.

F. W. Eaton (jrs)
F. W. EATON

FWE:jrs

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