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Subject Asbestos Dust Control Results of NIOSH Air Monitoring Survey of King City Bagging Room Operations

Project No. 530-10903

During the week of January 23-30, 1983, NIOSH ran a three-day air monitoring survey of the plant bagging operations. Objectives of the survey, test protocols and operating conditions are discussed in the attached report issued by the writer February 3, 1983.

The fiber count results for March 25, 26 and 27 are shown in Tables I, II and III, respectively. Ceiling value concentrations in the main circuit bagging area ranged from 0.4 to 6.8 fibers/cc for personal samples. Personal ceiling exposures for the RG-244 bagging operator were between 1.1 and 6.6 fibers/cc. Personal time weighted averages (TWA) based on approximately four hours of testing per day demonstrated levels in excess of 2.0 fibers/cc in four separate instances. TWA's for operators in the main circuit bagging room ranged from 0.5 to 3.6 fibers/cc. TWA's for the RG-244 bagger were 1.4 to 3.8 fibers/cc.

The high exposures are attributed for the most part to various mechanical problems evident during the course of these tests; the details of which are covered in the preliminary report appended. However, these tests demonstrate the need for some sort of continuous monitoring program. It would, in my opinion, behoove us to proceed with a plant evaluation of continuous air monitoring equipment as soon as possible.

Tom Cooper, project leader of the NIOSH survey team, contacted me March 30th. They have completed the dust counts and their results are considerably lower than ours. According to Tom, their highest ceiling value was 2.7 fibers/cc and the TWA's were all less than 0.6 fibers/cc. I did not discuss our findings with him. He is sending us copies of their raw data this week. The final report will not be forthcoming for at least another month or two.

EXHIBIT tabbies UC-199

In view of the discrepancies between labs, we recounted several of the more heavily loaded filters. These results are shown in Table IV. Generally speaking, the replicate counts demonstrated correlations with original test results within the accepted limits of variance. With one exception, Sample D-60, the replicate counts were significantly lower than the original count. This sample contained a considerable amount of fine fiber with diameters approaching the visible detection limit at 400X magnification and was very difficult to count. This type of fiber was detected in some of the other RG-244 samples as well. With fine particulate of this nature, every field viewing area has to be scrutinized in detail at several focal planes. Normally, a sample can be counted in 10 to 20 minutes. By comparison, it took approximately an hour to count D-60.

As you are aware, our fiber does not exhibit the morphology typical of Canadian chrysotile. Coalinga asbestos has a much smaller mean diameter and fiber length distribution. Because of this and the fact that most counting laboratories are not familiar with Coalinga asbestos, their fiber counts are often artifically low. I should point out that it is possible that the NIOSH counts are correct. Prior studies have shown that the variance between simultaneous multiple samples can be quite high. In this instance, however, I think the problem is related to differences in the counting procedure rather than between samples. It would appear that the NIOSH counting lab missed a significant amount of asbestos fiber in some of the samples.

B. L. Ingalls

BLI:st
Attach.