GRACE

Construction Products Division

To: W. R. Hanlon

From: F. W. Eaton

Date: February 14, 1979

Subject: Sims Landmark Fertilizer-Air Sampling Results

Ref: FWE to M. DiB. memo dated 2/14/79

cc: M. DiBenedictis
H. C. Duecker
J. W. Wolter
E. S. Wood
J. C. Yang

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One thing to be learned from sampling Landmark Fertilizer is that it is impossible to pre-judge the working environment and predict user exposure to tremolite fibers. Based on an initial survey of Landmark January 9, 1979, it was my opinion that with minor changes to the installed dust collecting system, fiber exposures would be less than the OSHA Limits. Since E. S. Woods April 13, 1978 Guidelines require exposures less than 2.0 and 10.0 fibers/cc without Engineering controls, Landmark was sampled January 18, 1979.

The first air samples were taken on two men charging approximately 80 bags of L-4 into the charging enclosure with the dust collecting system off. Dust generated during this operation was excessive and the plant manager, Lamar Steem, insisted that the dust collecting systems be turned on for the remainder of all sampling. As can be seen from the attached air sampling record sheet and TWA calculations, the two men charging vermiculite exceeded OSHA TWA and ceiling TLV's. It should be pointed out that on samples L-1 & 2 and L-10 & 11, the men were charging vermiculite at the side of the hopper enclosure. On Sample L-16 & 17, both men were inside the hopper enclosure with the dust pick-up point at their back. These tests also indicate considerable fiber exposure in handling empty bags from the charging station to and into the waste paper bailer.

In light of E. S. Woods memo February 2, 1979 concerning lightweight fertilizer use of Libby derived vermiculite, you should advise M. DiBenedictis of the possible options before submitting these results to Landmark.

The following is general information on Sims Landmark for the record. Landmark is primarily a field (heavy) fertilizer producer in and for Ohio. The Sims facility is Landmark's only ammoniated fertilizer plant but there are several other dry blend and seed plants in the state. Equipment and process flow at this facility is very similar to the ammoniated fertilizer process at Agway/Big Flats New York. The main difference is that this facility is much newer and there are three installed dust control systems with pick up points provided at most all dump and transfer points. All control devices are baghouses. Lawn fertilizer is handled by the Farm Supply Division of Landmark and prior to being manufactured at the Sims Facility, was private labeled by a producer in PA. According to Lamar Steen Plant Manager, light-weight fertilizer and pesticides represent a very small portion of Sims Landmark Total Production. 1979 production forecast is 620 tons lawn and 55,000 tons field fertilizer. The total 620 tons of lawn fertilizer is produced at

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at one time, stored in a bin, and bagged as required. Although there are weed killers such as 2-4D, the bulk of light weight (lawn) fertilizer is 22-11-7 bagged in 20, 25, and 33 1/3 lb. bags. In the 22-11-7 formulation, there is 221 lbs. of L-4 vermiculite per ton of fertilizer. Total vermiculite required for 620 tons is approximately 5,600 - 4 cu.ft. bags. According to Steen approximately 100 production hours is required to produce the 620 tons.

F. W. Eaton

FWE/cc

Attachment